DUN'S REVIEW

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This Month's Cover

TOLEDO

Prophetically, the first American post on the site of Toledo was named Fort Industry. Its future was as an industrial, railroad, and shipping city, in whose arteries pulse iron ores and coal; its past was behind the dawn of Christianity, when prehistoric Americans, the Mound Builders, toiled at earthworks where Clayton and Oliver Streets now cross. Near Toledo's site Mad Anthony Wayne's legion won Ohio from the Indians in the Battle of Fallen Timbers; and to Fort Defiance here Commodore Perry reported the battle of Lake Erie, "We have met the enemy, and they are ours." . . . Toledo was incorporated as a city in 1837, after settlement of border warfare between Michigan Territory and Ohio. Canals aided its early development. In 1876, when the cover view was drawn, people crossed the Maumee River by Cherry Street Toll Bridge and travelled via the 40-year-old Erie & Kalamazoo Railroad. . . . From these beginnings modern Toledo (above) rose, to be one of the four leading cities of Ohio. Its population is estimated at 342,500; its retailing is a $112,550,000, its wholesaling a $138,830,000, business. Manufactured goods have a value of $218,380,000, placing it among the first twenty industrial cities in the United States. The output is 0.8 per cent of the national total and is produced by 0.4 per cent of the nation's manufacturing establishments. . . . Its industry is diversified, with products ranging from spark plugs to industrial furnaces. Glass is a leading manufacture and oil refineries and automobiles are among the major industries. Transportation lines include sixteen steam and two electric railroads. Toledo's Museum of Art, one of the six largest in the country, has a noted glassware exhibit.

DUN'S REVIEW

for

MAY, 1940

CHICAGO RIVER SCENE AT SUNSET—PHOTOGRAPH BY CHARLES PHELPS CUSHING

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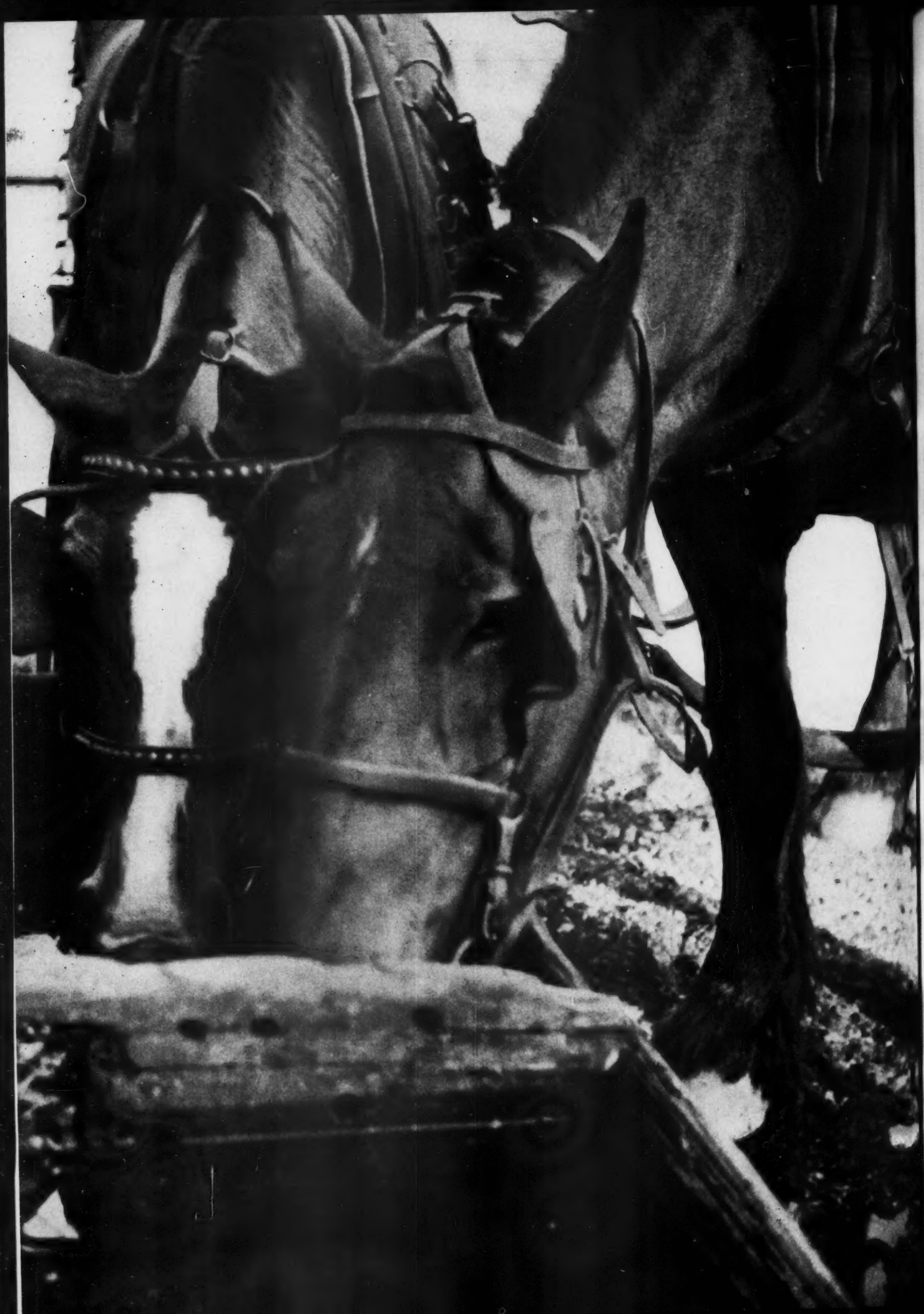
WILLARD L. THORP
Editor of DUN'S REVIEW

Information about subscription rates on page 53. . . . Second cover photograph, Fairchild Aerial Surveys, Inc. . . . Frontispiece, Harris & Ewing. . . . Printed in U. S. A.



I. Sales Trends for Retailing, Wholesaling, and Manufacturing, 1935-1939

(Figures for 1935 based on Census of Business, 1935; *for other dates,* Dun & Bradstreet, Inc., *estimates)*

	1935	1936	1937	1938	1939
Dollar Volume, in Millions					
Retailing	33,161	37,472	39,992	35,593	38,538
Wholesaling	17,662	20,894	23,154	20,176	21,855
Manufacturing[1]	44,994	53,453	60,710[2]	48,494	56,561
Percentage Changes from Previous Year					
Retailing	..	+ 13	+ 7	− 11	+ 8
Wholesaling	..	+ 18	+ 11	− 13	+ 8
Manufacturing	..	+ 19	+ 14	− 20	+ 17
Indexes, 1935 = 100					
Retailing	100	113	121	107	116
Wholesaling	100	118	131	114	124
Manufacturing	100	119	135	108	126

[1] Does not include railroad repair shops or gas manufacturers.
[2] *Census of Manufactures, 1937*, complete coverage, not an estimate.

SURVEY *of* BUSINESS TRENDS—1939
SALES *and* INVENTORIES

THE FINAL REPORT

How did 1939 sales compare with those of 1938? How high were inventories at the beginning of 1940 as compared with a year before, and a half-year before? How did separate lines of business fare? Answers to these and other questions important to business men are presented here in the record of a nation-wide survey, a Dun & Bradstreet, Inc., Research and Statistical Division project, directed by Walter Mitchell, Jr.

FLASH news compels attention. It's exciting. But the fine points about the strategy of the battle, the grubby details underlying economic and business trends are the staples upon which both captains of industry and honest-to-goodness generals base their plans for the future. This final report presents estimates built on a foundation both broader and deeper than was possible in the preliminary report in March; broader, because audited reports from many large corporations were not available until after the March 15 income tax deadline; deeper, because there has been time to subject the figures to more thorough checks by mathematical devices and by conferences with trade observers. The estimates are based on the experience of 22,000 concerns, whose sales volume in 1939 was more than $30,000,000,000.

Here executives may review the detail of sales and inventory data as far as it applies to their own industries, their suppliers, and their customers. Before beating the bush for these details, let's examine a few of the summary findings.

Manufacturers, whose sales volume was more severely buffeted than wholesale and retail volume in the economic storm of 1938, recovered most of the 1938 loss with a 17 per cent sales increase in 1939. Their total sales are estimated at 56½ billions, about 4 billions below 1937, the best year of the Thirties (table I).

With shorter steps to retrace, retail sales advanced less, 8 per cent in inde-

pendent stores and 7 per cent in chain outlets. The total volume of retail trade, estimated at 38½ billions in 1939, was 3 billions more than the year before, still 1½ billions short of the 1937 peak.

Although wholesale dollar volume likewise swelled by 8 per cent, the increase recaptured little more than half the ground lost in 1938. Wholesale merchants (excluding agents, brokers, and commission houses) sold an estimated volume just short of 22 billion dollars in 1939, some 1¼ billions less than in 1937.

Service trades, running about even with retailing, took in 6 per cent more in 1939 than in 1938 and topped 1937 by a small margin, according to data for the limited number of lines analyzed.

Contract construction, of the types covered by the survey, was second only to manufacturing in 1938-1939 comparisons. Receipts in 1939 were 12 per cent larger than in 1938; moreover, 3 per cent above 1937.

Added together, these dollar volume increases would look at least as good if expressed in quantities of goods, for the average price level, as recorded by the U. S. Bureau of Labor Statistics wholesale price index of 784 commodities was slightly lower in 1939 than in 1938.

For the volume of manufacturers' transactions greatly to exceed retail trade volume seems puzzling at first glance. Except in unusual instances the retail price of any article is certainly larger than the price f.o.b. factory. But a washing machine, for example, may have entailed sales by a blast furnace, foundry, rolling mill, machine shop, wire plant, paint factory, rubber company, plastic molder, and a dozen others.

The much-talked-of inventory accumulation during the late Summer and Fall, is reflected in increases generally through all the stages of production and distribution (table II).

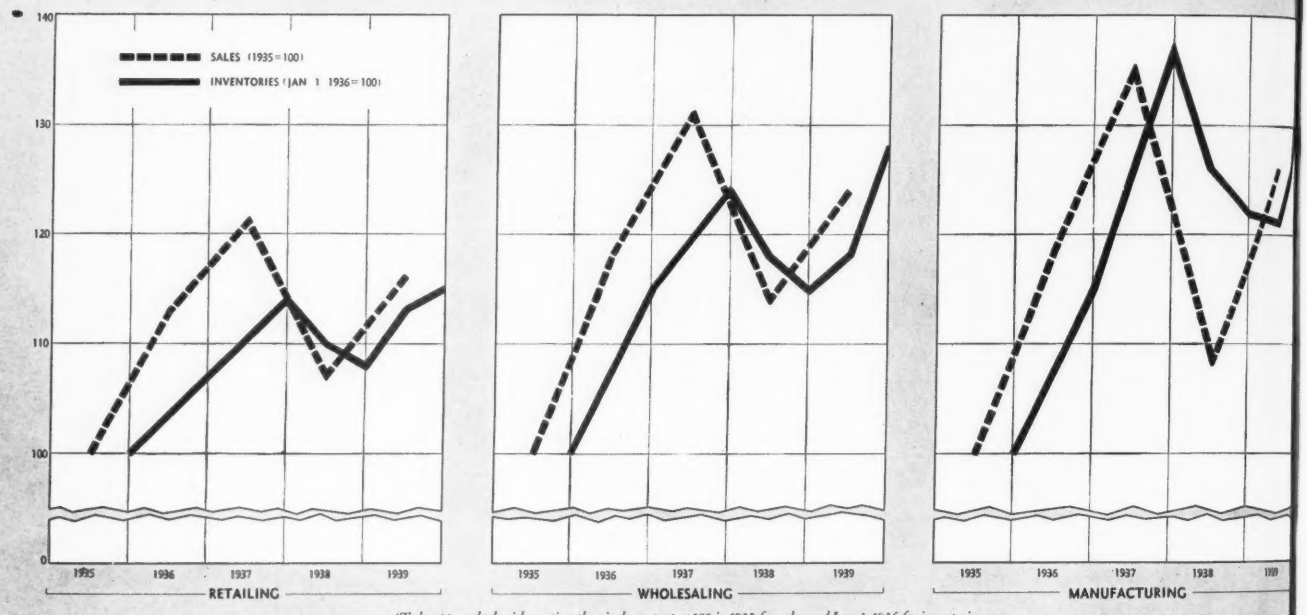
Wholesale trade started 1940 with stocks estimated at 2.6 billion dollars, slightly above the embarrassingly high level at the start of 1938, and 11 per cent more than on January 1, 1939.

Manufacturers' inventory valuation

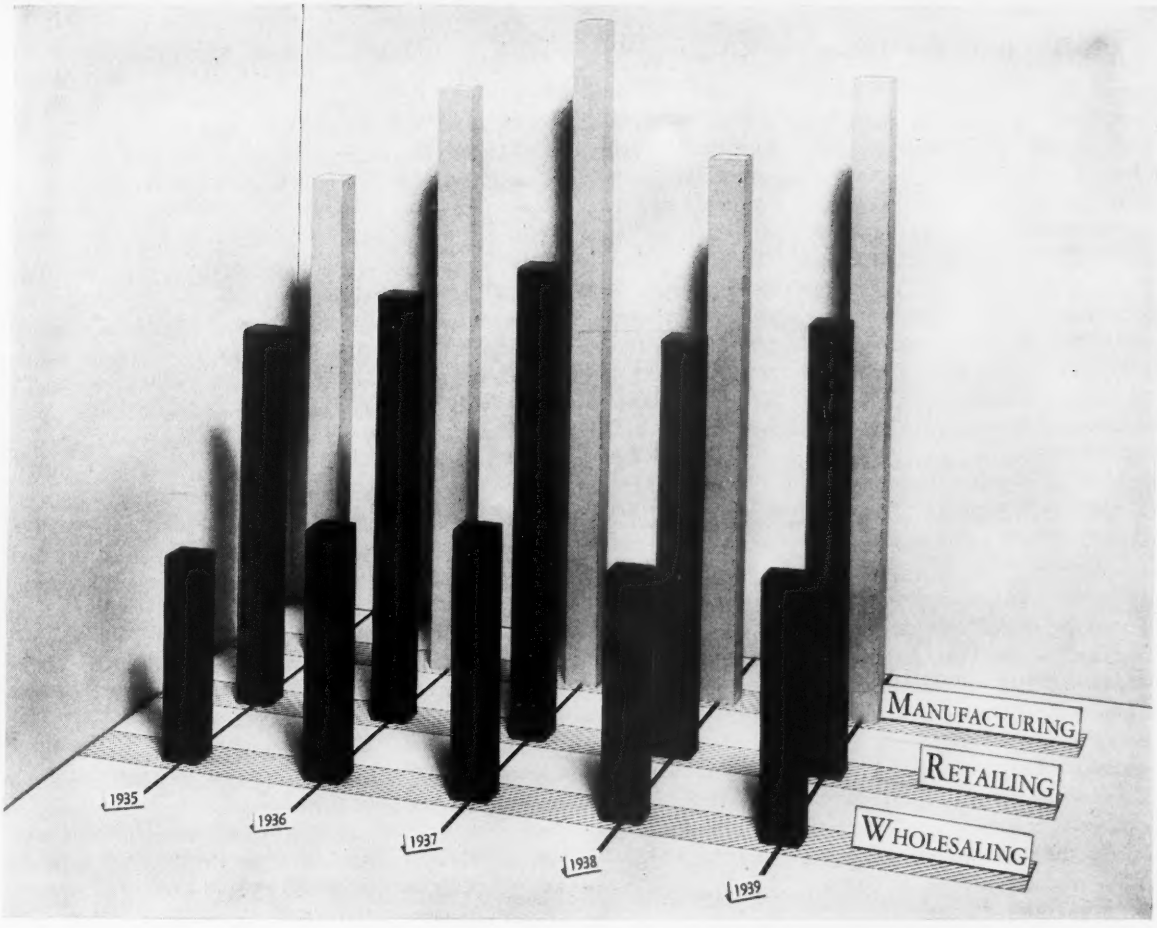
SALES AND INVENTORIES—COMPARISONS WITH 1935

RETAILING, WHOLESALING AND MANUFACTURING, 1935-1939

(Index numbers, data from tables I and II)

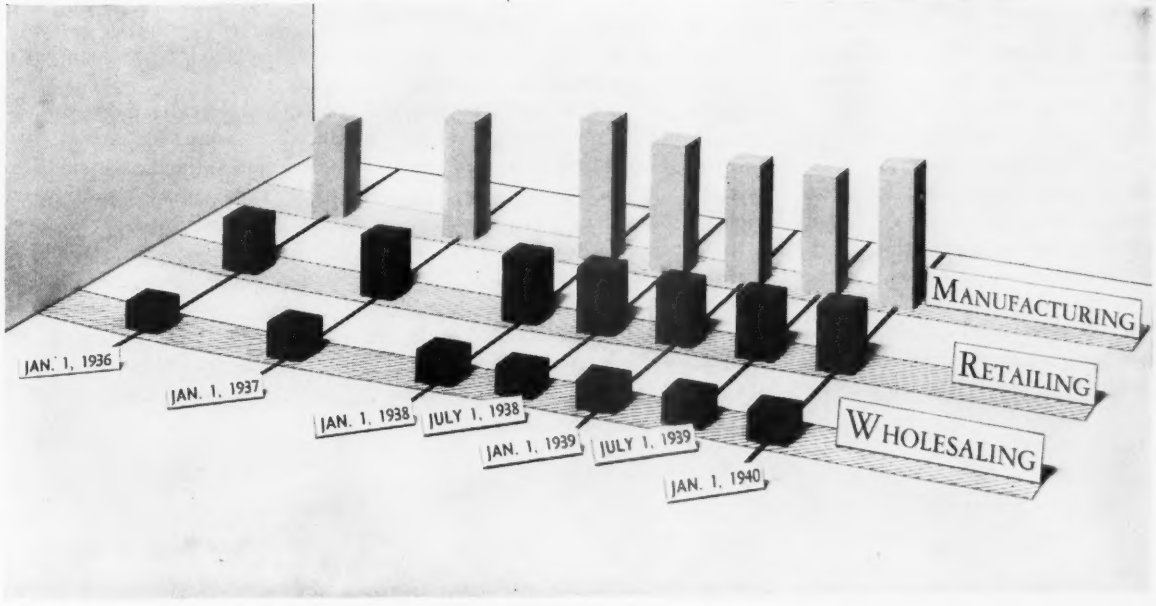


(To be approached with caution, these indexes start at 100 in 1935 for sales and Jan. 1, 1936 for inventories. The choice of the base year and its hazards are discussed in the text.)



SALES *In 1939 manufacturers, wholesalers, and retailers recovered from one-half to two-thirds of the 1937-1938 decrease in sales. The tallest column represents $60,710,000,000.* SALES

INVENTORIES *In dollars as well as percentages manufacturers' stocks varied most. Tallest: $11,851,000,000.* INVENTORIES



II. Inventory Trends for Retailing, Wholesaling, and Manufacturing, 1935-1939

(Figures for January 1, 1936 based on Census of Business, 1935, *and* Statistics of Income, 1935; *for other dates,* Dun & Bradstreet, Inc., *estimates)*

Dollar Value, in Millions

	Jan. 1, 1936	Jan. 1, 1937	Jan. 1, 1938	*July 1, 1938*	Jan. 1, 1939	*July 1, 1939*	Jan. 1, 1940
Retailing	4,416	4,717	5,033	*4,852*	4,757	*4,985*	5,069
Wholesaling	2,054	2,368	2,543	*2,416*	2,365	*2,426*	2,632
Manufacturing	8,653	9,951	11,851[1]	*10,938*	10,543	*10,406*	11,257

Percentage Change from Previous January

Retailing	..	+ 7	+ 7	− *4*	− 6	+ *5*	+ 7
Wholesaling	..	+ 15	+ 7	− *5*	− 7	+ *3*	+ 11
Manufacturing	..	+ 15	+ 19	− *8*	− 11	− *1*	+ 7

Indexes, January 1, 1936 = 100

Retailing	100	107	114	*110*	108	*113*	115
Wholesaling	100	115	124	*118*	115	*118*	128
Manufacturing	100	115	137	*126*	122	*121*	130

[1] The corresponding figure in the *Census of Manufactures, 1937*, is less than this total for January, 1938, by $1,837,000,000. The census covers only manufacturing plants within the United States while Dun & Bradstreet estimates are based on concerns as corporate units, whose inventories may include foreign holdings, goods in warehouse, etc.

increased by 7 per cent during the second half of the year, following a slight curtailment in the first half, but a substantial part of the added billion dollars represented more goods-in-process. The estimated value of 11¼ billions at the year-end fell a half billion, or 5 per cent, short of the holdings after the 1937 spree.

Retail chains added 9 per cent to their inventories during 1939; independent retailers, 6 per cent. The net result is an estimated value of 5 billions for all retail inventories on January 1, 1940, a 7 per cent increase during the year.

Rising prices during the Fall doubtless caused part of the increase in value of stocks on hand. The general price level, as shown by the Bureau of Labor Statistics index, was higher at the end than at the beginning of the year, even though (as noted before) the average for 1939 was below that for 1938. However, even after allowance for these distorting lenses, wholesale and retail stocks increased at a rate which justified the caution signals raised at the time.

No rule of thumb has been devised to tell just how much added inventory is required to handle a given increase of sales, but history appears usually to shake a reproving finger at rates of accumulation not in reasonable proportion to the rates at which sales expand. Apparently such a condition did develop in the field of wholesaling, while the amount of goods on retailers' shelves about kept pace with sales growth. Manufacturing inventories advanced less than half as rapidly as sales; moreover they reflected, in many heavy industries, a probably unavoidable expansion of the value of goods in process.

Also Indexes

Survey data have also been translated into indexes. Sales volume for 1935, in each trade and industry, was considered equal to 100 and index values since that time computed from the dollar estimates. This base—as with the January 1, 1936 base for inventories—involves no assumption that 1935 was "normal." It was merely the starting point for this series of Surveys; none of the succeeding years appears any more logical as a base.

For readers interested in the character of the statistical devices used in deriving the survey's estimates, in the pitfalls to be avoided, and in the checks and tests applied to the results, a few notes appear on pages 51-52. Contrary to the old adage that "figures don't lie but liars figure," raw, unchaperoned figures will lie, cheat, and steal if they are not watched every minute.

Any reader who is about to venture from here into the jungle of detail for industries and trades needs a compass and a native guide. For him the limitations of the survey and cautions regarding its use are a more important subject than a recital of its virtues.

In the first place, the original data were in dollar values, not quantities of goods. To reflect quantities the dollar estimates of sales must be qualified by year-average price changes, dollar estimates of inventories by year-end price changes.

Secondly, the figures reflect the experiences of companies rather than what happened to specific commodities. Thus, if a corporation's principal activity is the manufacture of automobiles, its total sales are credited to the automobile industry, even though the company manufactures substantial quantities of refrigerators, airplane engines, and other products.

Thirdly, the survey results are based

on a sample, not a complete census, and the sample consists of voluntary returns. Research-minded management is often better-than-average management. The lame, the halt, and the blind, moreover, are not generally disposed to spread the news of their ill-luck.

The survey estimates may have therefore some upward bias, but this tendency is in part compensated by the omission of every concern which has been in business less than two full years. These disqualified cases naturally include many lusty business babies enjoying—percentagewise—phenomenal growth.

From the detailed trade-by-trade discussion which follows, the reader will doubtless want to select, for first scouting, reports on those lines of direct interest to him.

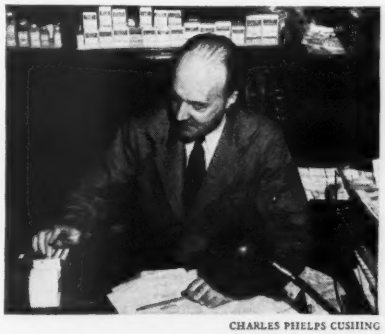
A manufacturer of men's clothing, for example, might discover first of all that his own 18 per cent increase in sales in 1939 was somewhat better than his industry's average of 14 per cent. He built up his inventories during the year by only 15 per cent and therefore notes with interest that the other producers covered by the survey started 1940 with 27 per cent larger stocks than a year earlier. He wonders how much of the added value was in piece goods bought at pre-war prices and how much the stock of finished garments hanging over the market in January may have been related to an unsatisfactory Spring season. Perhaps answers to those questions will help him understand more completely the competition and price levels in the Spring season just closed, which in turn is background for planning Fall merchandising.

He then looks back to the story of his suppliers. A comparison with other industries shows that woolen and worsted textile weavers participated in one of the most spectacular sales booms recorded in 1939—volume up 49 per cent. But he stops again at the next figure, drawing on current gossip in the trade, to estimate how much of the 20 per cent addition to woolen mill inventories may have piled up in finished goods. His conclusions may help him appraise the prospects for material prices during the rest of 1940.

His customers' trade history in 1939 also stirs up a question. Total sales of full-line men's clothing retailers increased 10 per cent in 1939, but shops selling mostly haberdashery sold only 5 per cent more. Obviously, then, suits and overcoats must have made a correspondingly greater gain in 1939 than the average for the men's clothing line as a whole—perhaps even 15 or 20 per cent over 1938. Does that mean that consumers who stocked up on suits and coats last Fall will sit tight next Fall? Or do the increases in sales of automobiles and electric appliances mean a recovery in consumer purchasing power and the "will-to-spend," which will convert payrolls into bigger sales of clothing next Fall?

He also observes that the apparent increase in retail sales of his product ran about even with the trend of men's clothing manufacturers' sales, hence the 9 per cent increase in stocks held by retail clothiers may have been other types of goods. Comparison with his own sales in recent Spring months yields the opportunity to see how such deduction and prophecy works out and suggests how much forecasting he can do on the basis of monthly retail sales and inventory estimates now becoming available from the United States Department of Commerce.

The above example may not be wholly realistic, and may not cover all the possibilities, but it does suggest how the figures have been used. The business statistician, who should know a little about all trades, must leave the rest to the business man who knows all about his own trade.



CHARLES PHELPS CUSHING

RETAILING

Reports from 14,000 retail concerns with sales of six billion dollars in 1938 form the basis for the estimates of trends among independent retailers in 34 trades and chain operators in nine trades. The prevailing upward trends in 1939 were the net results of larger sales and inventories reported by about two-thirds of these retailers, with the remainder reporting no change or downward movements. In the paragraphs below changes in sales volume are for the year 1939 compared with 1938; in inventory values, January 1, 1940, compared with January 1, 1939, unless otherwise noted.

Food and Farm Supplies. Again, as before in recent years, sales of small independent grocers without meat counters compared unfavorably with those of combination grocery and meat stores. Straight grocers' sales increase, negligible; grocery and meat stores nearly 3 per cent. Inventory increases, 7 and 9 per cent, respectively. Trade

observers believe that many grocers were caught with war-scare stocks of sugar and other commodities. Increases in both sales and inventories occurred in the face of the lower prices which prevailed throughout 1939, although to a lesser extent in the closing months.

Independent and chain retail bake shops fared about the same, with sales increases of approximately 1 per cent.

Sales of 1,300 reporting country general stores, up only 1 per cent. This is another chapter in an old story—the loss of trade from the country general store to the larger trading centers.

A significant sequel is the 8 per cent sales increase for farmers' supply stores, which deal in seeds, fertilizer, feeds, and implements, and generally are not competitive with stores in the larger trading centers. Like the general stores, however, they apparently loaded up with merchandise during the Fall; inventories up 11 per cent.

GENERAL MERCHANDISE. Sales of independent and chain department stores, with their wide range of merchandise, up 5 and 6 per cent respectively. A limited inventory increase of 3 per cent among the independents during 1939 may have been due partially to the unwillingness of department store managements to load up under pressure of war hysteria and partially to substantial Christmas holiday sales just before inventory time. Chains' year-end stocks, up 6 per cent.

Independent and chain limited-price variety stores' sales, up 7 and 6 per cent. Respective inventories, up 11 and 13 per cent, indicating to trade observers advance purchases of imported toys and novelties during the late Summer and Fall, in fear of war-time shortage.

With the exception of the automobile trade, the outstanding sales record of the year was reported by the mail-order houses, an 18 per cent increase.

APPAREL. Full-line men's clothing and furnishing stores' sales increase: double that of haberdashery and hat shops. Stocks of both, up between 8 and 9 per cent.

Independent and chain women's ready-to-wear stores: sales up 7 or 8 per cent, inventories 2 and 4 per cent. Trade observers report that furs and small wares accounted for an abnormally large proportion of the increased sales—to some extent at the expense of the dress and coat business.

In contrast, consumers in 1939 did poorly by their feet. Sales of independent shoe stores up only 2 per cent, those of chains only 4. In spite of trade opinion and other reports to the contrary, inventories of independents appeared to be 6 per cent higher and chains 14 per cent higher at the end of the year than at the beginning.

HOUSE FURNISHINGS. During 1939, radios, washing machines, and other appliances attracted the eye of many a citizen. The 17 per cent sales increase in these stores was topped only by mail-order and automobile retailing.

The 629 reporting furniture stores' sales, up 13 per cent. This estimate is conservative in comparison with another recent report showing sales in this trade up about 20 per cent in 1939. Additions to stocks, moderate.

LUMBER AND BUILDING MATERIALS. A sales increase of only 10 per cent among lumber yards in 1939 may seem small in view of reports of a greatly increased volume of construction. Much of this construction, however, was government work or in other large contracts, material for which was purchased direct from manufacturers or wholesalers. Inventories up only 6 per cent, despite the fact that wholesale prices of building materials rose during the year an average of 4 per cent.

Hardware dealers apparently shared even less of the additional construction business; their sales rose only 6 per cent over 1938.

AUTOMOTIVE. Automobile dealers turned in the spectacular performance customary in that trade, whether the general trend of business is toward the basement or the roof. Sales of automobile dealers were up 26 per cent, inventories only 4.

Chain auto accessory stores increased sales in 1939 by 20 per cent, almost twice as much as independents with 11 per cent.

For some 1,200 independent filling stations, a 5 per cent sales increase despite lower gasoline prices.

CHARLES PHELPS CUSHING

WHOLESALING

MORE than 2,000 wholesale concerns, with a total sales volume of approximately 950 millions dollars, about 5 per cent of the national total, form the basis for the estimates. In two of the twenty trades, estimates by the United States Department of Commerce, based on exceptionally broad samples, have been used.

Three-quarters of the reporting concerns last year increased their sales. At the same time, 70 per cent of the wholesalers were building up stocks above their 1938 year-end levels.

III. Retailers' Sales and Inventory Trends, 1935-1939

Sales: Index of Dollar Value (1935 = 100) 1936	1937	1938	1939	Trend 1938 to 1939 Per Cent Change	Estimated Value, 1939 Millions of Dollars	Independent Retailers (34 trades)	Inventories: Index of Dollar Value (January 1, 1936 = 100) Jan. 1, 1937	Jan. 1, 1938	July 1, 1938	Jan. 1, 1939	July 1, 1939	Jan. 1, 1940	Trend during 1939 Per Cent Change	Estimated Value Jan. 1, 1940 Millions of Dollars
106	115	109	112	+ 2	6,611	Foods	103	103	..	104	..	112	+ 8	353
106	112	105	106	0	1,438	Groceries	103	104	105	107	110	114	+ 7	153
105	115	110	113	+ 3	2,851	Groceries and Meats	103	103	105	102	104	110	+ 9	200
103	113	111	113	+ 2	693	Meat and Fish	..	..	..	..	..	..	..	..
114	128	124	125	+ 1	61	Bakeries	..	..	..	..	..	..	..	..
111	120	111	117	+ 5	1,568	Other Food Stores	..	..	..	..	..	..	..	..
111	120	106	110	+ 3	2,012	Farm Supplies, General Stores	108	112	..	109	..	115	+ 5	393
109	114	104	105	+ 1	1,165	Country General Stores	103	106	106	103	104	106	+ 4	262
114	122	106	114	+ 8	685	Farmers' Supplies	108	112	104	110	106	121	+ 11	75
123	161	133	135	+ 1	162	*Farm Implements*	136	157	166	157	154	164	+ 4	56
113	119	112	122	+ 9	4,124	General Merchandise	116	114	..	109	..	118	+ 8	801
109	113	105	110	+ 5	2,256	*Department Stores*	110	107	97	98	102	101	+ 3	340
111	115	106	112	+ 5	589	Dry Goods, Gen'l Merchandise	107	114	116	111	114	117	+ 6	204
119	131	131	141	+ 7	101	Limited-Price Variety	104	111	121	112	128	124	+ 11	28
126	140	135	159	+ 18	1,178	*Mail-Order Houses*	134	133	114	129	..	155	+ 19	229
113	120	107	115	+ 7	2,190	Apparel	110	118	..	111	..	118	+ 6	521
115	117	100	111	+ 10	572	Men's and Boys' Clothing and Furnishings	110	120	117	107	113	117	+ 9	171
113	120	108	113	+ 5	167	Haberdashery and Men's Hats	116	129	..	116	126	125	+ 8	65
114	127	115	123	+ 7	767	Women's Ready-to-Wear	111	116	114	115	119	117	+ 2	110
109	113	101	109	+ 8	392	Family, Children's Clothing	108	118	116	109	113	116	+ 6	100
110	117	111	114	+ 2	292	*Shoes*	105	112	114	111	116	118	+ 6	75
123	135	110	126	+ 14	1,169	Furniture, House Furnishings	109	118	..	112	..	120	+ 7	283
119	138	116	134	+ 16	210	House Furnishings, Floor Coverings	107	109	104	105	109	111	+ 5	64
129	144	116	136	+ 17	108	*Radios, Electric, Gas Appliances*	120	126	120	113	120	121	+ 7	14
123	134	108	122	+ 13	851	Furniture	109	121	116	115	118	123	+ 8	205
123	136	121	129	+ 7	2,384	*Lumber, Building Materials,* Hardware	107	116	..	115	..	120	+ 5	612
129	143	129	142	+ 10	1,229	Lumber and Building Materials	108	118	117	117	122	124	+ 6	293
115	126	116	124	+ 7	158	*Paint, Wallpaper, and Glass*	107	117	124	117	124	125	+ 7	40
117	127	113	119	+ 6	664	Hardware	104	111	113	109	112	114	+ 4	223
118	138	113	114	+ 1	333	Hardware, Farm Implements	111	124	130	123	124	125	+ 2	56
125	134	109	128	+ 17	7,693	Automotive Products	104	139	..	121	..	127	+ 5	648
130	135	99	124	+ 26	4,784	Motor Vehicles	101	140	116	116	134	120	+ 4	481
117	127	122	135	+ 11	253	Automobile Accessories, Parts	114	128	139	132	142	147	+ 11	56
116	133	129	136	+ 5	2,656	Filling Stations	115	138	156	141	151	151	+ 7	111
118	126	118	127	+ 7	1,570	*All Other* Restaurants, Eating Places	..	..	..	..	..	..	..	..
117	132	125	136	+ 8	985	Drinking Places, Taverns, Bars	..	..	..	..	..	..	..	..
111	119	116	119	+ 3[1]	1,089	Drugs and Cosmetics	104	109	110	110	111	114	+ 3	248
116	124	110	118	+ 7	1,017	Coal, Other Fuel	118	126	121	117	112	126	+ 8[1]	99
111	124	118	126	+ 7	125	*Nurseries and Florists*	..	..	..	..	..	..	..	..
122	130	113	124	+ 9	265	Jewelry	106	117	113	114	113	124	+ 8	157
109	117	108	112	+ 3	144	Stationery, Books, Newsdealers	100	99	100	101	101	103	+ 3	37
..	..	..	..	+ 8	363	*All Other Retail Stores*	..	..	..	..	..	..	+ 6	254
114	122	107	116	+ 8	31,741	All Independent Retailers	106	114	..	108	..	115	+ 6	4,406
						Retail Chains (9 trades)								
105	106	104	113	+ 8	2,803	Groceries and Meats	96	94	84	89	88	97	+ 9	132
110	123	118	119	0	61	Bakeries	..	..	..	..	..	..	..	..
118	124	117	124	+ 6	1,578	*Department Stores*	121	119	126	114	128	120	+ 6	192
109	113	111	118	+ 6	834	Limited-Price Variety	116	115	121	107	119	122	+ 13	116
117	127	118	127	+ 8	315	Women's Clothing, Accessories	125	123	..	122	129	127	+ 4	44
114	120	116	121	+ 4	310	Shoes	108	120	111	99	110	113	+ 14	72
109	135	133	160	+ 20	299	Automobile Accessories	119	127	..	124	154	156	+ 26	47
108	117	107	108	+ 1	231	Restaurants, Eating Places	..	..	..	..	..	..	..	..
107	115	112	115	+ 3	366	Drugs and Cosmetics	110	118	103	111	104	110	— 1	60
110	115	111	119	+ 7	6,797	Retail Chains	112	113	..	106	..	115	+ 9	663
113	121	107	116	+ 8	38,538	All Retailing	107	114	110	108	113	115	+ 7	5,069

[1] United States Department of Commerce.

In eleven out of the twenty trades sales advanced 10 per cent or more. Only seven reported 1938-1939 sales increases which at least matched 1937-1938 setbacks:

	Per Cent Change in Sales Volume	
	1937 to 1938	1938 to 1939
Confectionery	— 5	+ 8
Meat and Fish	— 8	+ 8
Clothing, Furnishings, Shoes	— 10	+ 13
Lumber, Millwork, Bldg. Materials	— 18	+ 19
Petroleum Products	— 2	+ 5
Automotive Equipment	— 7	+ 13
Tobacco Products	— 1	+ 8

Foods and Beverages. Increases of 4 per cent in sales and 11 per cent in stocks reported by wholesalers of foods and beverages in 1939 cannot tell what actually happened to the individual trades making up this group. Sales of alcoholic beverage dealers were up 10 per cent; warehouse stocks of liquors rose even higher, 19 per cent.

Sales by dairy and poultry products dealers, shrank about 3 per cent, with only four out of every ten concerns in the survey reporting increases. Grocery wholesalers—including both general line and specialty line establishments—reported only a 2 per cent rise in volume. The limited advance in this trade resulted in part, some trade observers declare, from an adverse effect of the Robinson-Patman Act on voluntary-group wholesalers. In addition, general line wholesale grocers reported stocks up 13 per cent, probably representing Fall purchases of sugar and other items affected, or thought to be affected, by war conditions.

Dry Goods and Apparel. According to observers in the trade, dry goods wholesalers' inventories probably increased by more than the estimate of 14 per cent; perhaps as much as 20 or 25 per cent above the level at the beginning of the year.

A notable instance of inventory accumulation appears among clothing, furnishings, and shoe wholesalers, with stocks 23 per cent above the 1938 year-end figure. This estimate is substantiated by trade observers who estimate that shoe inventories were up at least 25 per cent, while the physical volume of stocks held by ready-to-wear jobbers increased approximately 15 per cent. Prices for these goods moved steadily upward during this period.

IV. Wholesalers' Sales and Inventory Trends, 1935-1939

Sales: Index of Dollar Value (1935 = 100)				Sales: Trend 1938 to 1939	Sales: Estimated Value, 1939	20 Wholesale Trades	Inventories: Index of Dollar Value (January 1, 1936 = 100)						Inventories: Trend during 1939	Inventories: Estimated Value Jan. 1, 1940
1936	1937	1938	1939	Per Cent Change	Millions of Dollars		Jan. 1, 1937	Jan. 1, 1938	July 1, 1938	Jan. 1, 1939	July 1, 1939	Jan. 1, 1940	Per Cent Change	Millions of Dollars
111	122	109	114	+ 4	6,639	Foods and Beverages	118	128	..	124	..	138	+ 11	593
114	122	116	125	+ 8	140	Confectionery	109	116	124	114	109	123	+ 8	11
110	121	112	109	— 3	589	Dairy and Poultry Products	..	..	..	..	..	..	..	..
107	117	105	108	+ 2	2,102	Groceries	119	126	115	118	117	134	+ 13	324
111	122	112	121	+ 8	680	Meat and Fish	110	95	81	104	106	100	— 4	19
115	123	110	117	+ 7	1,140	Produce and Fruits	..	..	..	..	..	..	..	..
129	142	125	137	+ 10	958	Alcoholic Beverages	121	139	134	143	149	170	+ 19	94
103	116	102	104	+ 2	1,030	Other Food Specialties	115	136	144	131	127	139	+ 6	145
114	116	101	112	+ 11	1,836	Dry Goods and Apparel	108	116	..	96	..	113	+ 17	270
114	114	103	117	+ 13	757	Clothing, Furnishings, Shoes	112	126	122	114	123	140	+ 23	103
114	117	99	109	+ 10	1,079	Dry Goods (general line)	106	111	101	89	94	101	+ 14	167
124	141	119	137	+ 15	1,260	Lumber, Building Materials, Hardware	113	121	..	112	..	125	+ 11	213
127	149	122	145	+ 19	716	Lumber, Millwork, Building Materials	108	122	118	118	119	129	+ 10	82
120	131	114	127	+ 11	544	Hardware	116	120	118	109	118	123	+ 12	131
110	120	112	117	+ 4[1]	523	Drugs	107	121	120	117	110	124	+ 6[1]	85
127	141	138	145	+ 5	625	Petroleum Products	..	..	..	..	..	..	..	..
118	131	122	138	+ 13	554	Automotive Equipment	112	120	118	117	122	127	+ 9	107
129	155	124	140	+ 13	1,511	Supply Houses	112	129	..	123	..	133	+ 9	278
135	157	128	147	+ 15	357	Plumbing, Heating Supplies	111	123	122	115	122	131	+ 14	67
134	172	125	142	+ 13	508	Machinery, Equipment	115	137	135	131	132	141	+ 7	92
123	142	121	135	+ 12	646	Other Miscellaneous Supplies	110	125	124	121	125	130	+ 7	119
134	166	121	148	+ 22	852	All Other Electrical Goods, Appliances	133	165	147	129	143	148	+ 15	112
114	128	110	121	+ 10	494	Paper, Paper Products	109	121	116	111	117	121	+ 8[1]	70
113	121	120	130	+ 8	1,015	Tobacco Products (except leaf)	111	118	116	111	116	116	+ 4	47
124	138	117	127	+ 8	6,546	Other Wholesaling	118	120	..	113	..	126	+ 11	857
118	131	114	124	+ 8	21,855	All Wholesaling	115	124	118	115	118	128	+ 11	2,632

[1] United States Department of Commerce.

LUMBER, MILLWORK, BUILDING MATERIALS. Lumber, millwork, and building material dealers recorded one of the outstanding sales increases in wholesale trade—19 per cent. Trade observers say that 1939 mill (drop) shipments handled by wholesalers were about 25 per cent larger than in the previous year. Hardware wholesalers, with more than nine concerns out of ten reporting increases, were most consistent in showing upward trends.

SUPPLY HOUSES. The 1939 sales increase of 13 per cent reported for all types of wholesale supply houses agrees closely with the separate experiences of dealers in machinery equipment and in plumbing and heating supplies. Sales by the former, up 13 per cent, were in line with the war-accelerated trend of machinery production. Sales of the latter, up 15 per cent. Inventories up, respectively, 7 and 14 per cent.

ALL OTHER. The steepest sales increase recorded by any wholesale trade was made by electrical goods and appliance wholesalers, 22 per cent, with nine out of every ten concerns contributing to the upswing.

The sales experience of drug and sundry wholesalers closely parallels the trend of the foods and beverages group. The comparatively modest showings made by these lines are undoubtedly allied to their relative stability, good times and bad.

CHARLES PHELPS CUSHING

MANUFACTURING

THE survey estimates for manufacturing are based on the experience of more than 4,300 concerns with 1938 sales totalling almost 20 billion dollars, 40 per cent of total manufacturing volume. Compared with the 8 per cent increases reported by wholesaling and retailing, 17 per cent is a spectacular expansion. And almost all of the additional 8 billion dollars' worth of goods involved was sold by members of the machinery, durable consumer goods, and other basic industries, such as steel. Three out of every four concerns reported sales gains in 1939, seven out of every ten built up inventories.

FOOD. The food industries, which by nature steer a steadier course than do durable goods, neither sagged so low in 1938 nor advanced so sharply in 1939. With the exception of a success story for soft-drink bottlers, food manufacturers' sales volume climbed only moderately in total and in some divisions decreased.

The shrinkage of 2 per cent in the baking industry's sales was apparently the net result of opposing trends. Trade observers suggest that the unfavorable experience of biscuit and cracker bakers outweighed the favorable experience reported in the cake and bread division.

In the brewing industry the survey lacks data from two or three important concerns. Reporting brewers' sales, up 4 per cent; but government figures indicate less than 3 per cent gain in the gallonage moved.

Although tax-paid withdrawals (gallonage) of distilled liquors were 10 per cent higher in 1939 than in 1938, a broad sample of concerns in the industry reports only 5 per cent larger dollar sales volume. In part this difference may be the result of lower prices. The dollar value of inventories did not change during 1939, in line with trade comment that current production efforts are said to be devoted to replacing withdrawals and not to increasing the supply of whiskeys in bond.

Very possibly, advance purchases of sugar and syrup during the September buyers' panic may have accounted for the inventory rise reported by confectioners, whose stocks increased 12 per cent, though sales for the year rose only 2 per cent.

The survey's sample of the meat packing industry, reporting no change in sales, includes several large concerns with fiscal closing dates at the end of September or October. Trade observers, however, believe that there would be little difference if all comparisons had been made on a calendar year basis.

TEXTILE, CLOTHING, AND SHOES. The textile industries in general and woolen goods in particular enjoyed a better year in 1939 than had been their fortune for some time past. Wool textile makers' sales up, 49 per cent; inventories, 20 per cent, some of which represented price advances. Sales by cotton textile producers up also, 25 per cent; inventories, down 6 per cent, largely because a few important producers curtailed stocks.

Part of the increased production of wool textiles became inventories in the hands of men's and boys' clothing manufacturers, whose stocks were up 27 per cent, sales only 14.

The 25 per cent increase in value of hosiery manufacturers' inventories is reported to be chiefly owing to higher prices for silk.

Shoe manufacturers reported sales up

9 per cent, close to trade estimates of an 8½ per cent increase in number of pairs produced. Stocks kept pace with sales.

Lumber and Paper Products. Lumber prices averaged slightly higher in 1939 than in 1938 and were substantially higher during the latter part of the year when important sales increases took place. A 20 per cent addition to board footage shipments, as recorded by the National Lumber Manufacturers' Association, appears as a 27 per cent sales increase. Although board footage stocks were depleted, year-end valuation was up 1 per cent. Furniture manufacturers, with a 22 per cent sales increase, somewhat depleted their stocks of finished goods, but about three out of four appeared to have anticipated requirements of lumber and other materials sufficiently to cause inventories to increase 13 per cent in dollar value.

An 8 per cent inventory increase for paper mills and converters probably represents heavier holdings by the converters than by the primary producers. Prices also advanced during the Fall—which probably accounted for a substantial part of the sales increase of 13 per cent. The trends for paper box makers, estimated separately, are almost identical.

In the printing industry trade observers estimate a slight decrease in the number of "productive hours," although dollar sales increased 3 per cent.

Chemicals. Sales of industrial chemicals and chemical products, up 17 per cent; no increase in inventories. The paint, varnish, and lacquer industry, stimulated by construction trends, reported a 14 per cent sales increase, a parallel increase of inventories. The latter was in some part the result of war increases in the price of imported solvents and paint vehicles.

The drug, perfume, and cosmetic industry behaves in the business cycle much like food and other staple products. The sales decrease in 1938 was less severe and the 5 per cent increase in 1939 less spectacular than general trends in heavy industries.

Petroleum gallonage rose 7 per cent; average gasoline prices dropped almost one cent a gallon; sales increased 5 per cent. The 8 per cent decrease in value of inventories is largely the result of revaluation at lower prices.

Iron and Steel Products. One of the most spectacular records reported by any industry, steel sales were up 48 per cent. Inventories, including more goods in process, up only 7 per cent.

The survey classification "iron and steel," includes pig iron producers, and wire drawing, tin plate, and rolling mills as well as the large integrated steel companies.

The survey classes iron and steel fabricators in a separate group, with a sales increase of 36 per cent. Larger stocks of steel bought to insure continuous operation, and a larger value of goods in process, show up as a 20 per cent increase in the value of inventories. A similar increase in goods on hand is reported by the foundry and drop-forging industries along with a 56 per cent increase in sales.

The hardware industry, with 28 per cent larger sales, and the plumbing and heating equipment industry with a 20 per cent increase, were tied more closely to the rate of advance in the construction field.

Stone, Clay, and Glass Products. The 17 per cent sales increase in stone and stone products appears to be the result of a 26 per cent increase in the sales of cement, but only a 10 per cent rise in sand and gravel sales and probably a similar increase in the lime industry. A 10 per cent increase in the value of stocks is difficult to account for; barrels of cement in stock at the beginning of 1940 were very slightly fewer than a year earlier, and prices had advanced by only about 2 per cent.

The clay and glass group likewise includes products with divergent fortunes. According to the Deparment of Commerce, shipments of bricks and other structural clay products increased by 29 per cent. The number of units shipped by the glass container industry, however, is estimated as 14 per cent larger in 1939 than in 1938, and prices are believed to have averaged substantially lower.

The net result of this mixture in the survey estimate for clay and glass products together is a 19 per cent sales increase.

Machinery. Mechanical equipment of almost all sorts seems to have sold well during 1939. The airplane industry's 50 per cent increase in sales does not tell the entire story. A parallel 47 per cent inventory increase indicates not hoarding of materials, but an enormous amount of goods in process.

The railway equipment industry's 67 per cent increase in orders, as reported by *Railway Age*, showed up as goods in process rather than as completed shipments. Sales volume up only 10 per cent, inventories up 61.

Calendar-year records were not available from some concerns in the agricultural machinery industry; survey returns may have excluded some substantial year-end orders. Sales up only 3 per cent; inventories down 5 per cent.

Office and business machinery sales up 7 per cent, inventories down 6. The survey sample, dominated by four large well-known companies, may not be accurate for the entire industry.

"Electrical apparatus and appliances" includes a wide variety of goods manufactured by generalized industrial giants and specialized pygmies. The 42 per cent increase in sales conceals a vast variety in the trend of individual products. Refrigerator sales are reported up 50 per cent, other household appliances about 25.

Automobiles and Tires. Although the automobile industry reports a 41 per cent increase in the wholesale value of vehicles shipped during 1939, operating statements from corporations representing about three-fourths of the industry

V. Manufacturers' Sales and Inventory Trends, 1935-1939

Sales

Index of Dollar Value (1935 = 100)				Trend 1938 to 1939	Estimated Value, 1939	49 Industries
1936	1937	1938	1939	Per Cent Change	Millions of Dollars	
110	119	106	107	0	10,609	Foods
109	115	106	103	− 2	1,272	Baking
117	128	114	118	+ 4	498	Breweries
102	104	97	103	+ 5	296	Distilleries and Wineries
137	174	174	206	+ 19	329	Beverages, Non-Alcoholic
112	116	104	107	+ 2[2]	428	Confectionery
113	122	113	113	0	1,587	Dairies, Creameries, Milk
110	118	107	108	0	2,854	Meat Packing
102	106	96	96	0	123	Ice Manufacturing
109	117	100	99	− 1	3,222	All Other Food Manufacturing
111	116	94	114	+ 21	6,695	Textiles and Clothing
112	119	78	117	+ 49	896	Woolen and Worsted Goods
117	124	98	122	+ 25	1,259	Cotton Textiles
109	113	92	106	+ 14	1,110	Men's and Boys' Clothing and Furnishings
106	108	97	109	+ 12	1,386	Women's and Children's Clothing and Accessories
111	115	111	122	+ 10	385	Hosiery
113	119	94	114	+ 21	1,659	Other Textiles and Products
131	147	116	142	+ 23	2,084	Forest Products
136	154	123	157	+ 27	864	Lumber
137	152	114	139	+ 22	607	Furniture
120	136	109	129	+ 18	613	Planing Mill Products
109	123	109	120	+ 9	4,002	Paper, Printing, Publishing
112	133	114	129	+ 13	1,368	Paper, Products (except boxes)
118	137	107	121	+ 13	361	Boxes, Paper
108	117	103	106	+ 3	819	Printing, Binding (book, job)
103	114	109	119	+ 9	1,422	Newspapers, Periodicals (large)
123	158	162	167	+ 3	32	Newspapers (small), Printing
119	134	117	130	+ 11	6,107	Chemicals, Drugs, Petroleum
123	135	112	132	+ 17	2,647	Chemical Products, Industrial Chemicals
111	116	112	117	+ 5	489	Drugs, Perfumes, Cosmetics
115	129	102	116	+ 14[2]	485	Paints, Varnishes, Lacquers
118	138	126	133	+ 5	2,486	Petroleum Refining
106	122	102	117	+ 14	1,428	Leather, Leather Products
104	124	100	120	+ 20	698	Leather, Products (exc. shoes)
107	119	104	113	+ 9	730	Shoes
132	147	121	143	+ 18	1,426	Stone, Clay, Glass Products
144	154	126	147	+ 17	443	Stone and Stone Products
127	144	119	141	+ 19	983	Clay and Glass Products
..	163	103	144	+ 40	6,061	Iron, Steel Products
136	175	103	153	+ 48	3,641	Iron and Steel Manufacturing
132	159	97	151	+ 56	377	Foundries and Drop Forgings
124	135	88	119	+ 36	500	Iron and Steel Products
126	148	104	133	+ 28	880	Hardware
..[1]	150	114	137	+ 20	663	Iron and Steel Plumbing and Heating Equipment
..	151	106	136	+ 28	9,731	Machinery and Transportation Equipment
..[1]	235	296	444	+ 50	270	Airplanes and Equipment
129	161	124	176	+ 42	2,549	Electrical Equipment
..[1]	345	184	202	+ 10	239	Railroad Equipment
132	194	160	164	+ 3	479	Agricultural Machinery
139	174	134	146	+ 9	1,605	Miscellaneous Machinery
122	143	124	133	+ 7	271	Office, Business Machinery
123	129	80	105	+ 32	2,522	Automobiles
118	134	85	116	+ 37	1,796	Automotive Parts, Accessories
131	153	114	150	+ 32	1,483	Miscellaneous Non-ferrous Metal Products
120	143	118	149	+ 26	296	Jewelry and Findings
115	130	105	126	+ 20	857	Tires and Other Rubber Goods
111	116	114	117	+ 2	1,277	Tobacco Products
..[1]	185	138	167	+ 21	1,158	Non-ferrous Smelting, Refining
..	..	..	..	+ 17	3,347	Other Manufacturing
119	135	108	126	+ 17	56,561	All Manufacturing

Inventories

Index of Dollar Value (January 1, 1936 = 100)						Trend during 1939	Estimated Value Jan. 1, 1940
Jan. 1, 1937	Jan. 1, 1938	July 1, 1938	Jan. 1, 1939	July 1, 1939	Jan. 1, 1940	Per Cent Change	Millions of Dollars
123	133	..	128	..	135	+ 6	1,327
97	98	83	88	71	100	+ 13	56
118	122	..	115	..	124	+ 8	52
120	134	..	133	120	134	0	194
147	171	177	179	172	198	+ 11	16
117	116	125	126	130	142	+ 12	85
..	..	..	..	..	..	..	..
125	117	..	98	87	96	− 3	176
..	..	..	..	..	..	..	..
128	146	139	143	140	155	+ 8	748
111	115	..	97	..	109	+ 13	997
109	103	85	89	98	108	+ 20	199
112	121	109	111	119	105	− 6	247
114	126	115	87	103	110	+ 27	154
105	105	103	99	99	125	+ 27	87
104	113	115	105	124	131	+ 25	67
111	116	..	92	..	105	+ 15	243
108	123	..	121	..	129	+ 6	474
108	129	123	128	125	129	+ 1	210
106	117	114	112	118	126	+ 13	124
108	121	116	120	117	131	+ 9	140
109	131	..	119	..	129	+ 8	259
110	136	130	124	121	134	+ 8	215
103	113	107	103	97	111	+ 8	44
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
..	..	..	..	..	..	..	..
107	131	..	119	..	117	− 1	1,068
110	141	136	121	116	122	0	483
122	142	135	124	118	123	− 1	83
109	128	119	113	117	130	+ 15	119
100	118	118	114	114	105	− 8	383
109	122	..	98	..	102	+ 3	241
107	121	..	99	..	98	0	148
111	124	111	98	110	107	+ 9	93
111	131	..	114	..	123	+ 8	276
105	120	109	108	103	119	+ 10	94
114	138	122	118	116	125	+ 6	182
116	148	..	133	..	145	+ 9	1,434
114	149	129	137	131	147	+ 7	894
117	128	113	114	..	136	+ 20	42
..[1]	167	151	139	147	167	+ 20	129
117	140	131	126	128	140	+ 10	217
..[1]	152	..	125	..	129	+ 3	152
123	156	..	120	..	135	+ 13	1,769
..[1]	225	..	188	..	276	+ 47	66
120	160	155	121	120	130	+ 7	431
..[1]	192	..	132	..	214	+ 61	75
120	158	135	129	119	123	− 5	162
..[1]	156	130	121	121	131	+ 8	419
135	165	144	151	153	142	− 6	51
118	145	90	108	80	128	+ 19	394
130	145	105	102	97	135	+ 31	171
..[1]	145	129	133	138	147	+ 10	252
95	108	102	94	110	98	+ 4	59
125	142	137	114	118	121	+ 6	189
108	120	126	125	..	124	− 1	697
..[1]	123	..	113	..	111	− 1	256
..	..	..	..	..	..	+ 7	1,959
115	137	126	122	121	130	+ 7	11,257

[1] Combined with other industries, no separate estimate.
[2] United States Department of Commerce.

VI. Trends of Contracting Receipts, 1938-1939

TYPES OF CONTRACTING	Trend 1938 to 1939 Per Cent Change
General Building	+10
Painting and Decorating	+ 9
Plumbing and Heating	+18
Electrical Contracting	+18
Sheet Metal Work	+14
Other Contracting	+11
TOTAL, 6 TRADES	+12

show only a 32 per cent increase in dollar sales. For one thing, sales of parts increased by only 18 per cent and subsidiaries producing non-automotive products may not have fared so well as the parent companies.

Sales by makers of automobile accessories and parts up 37 per cent, even more than those of automobile makers. Stocks up 31 per cent suggest substantial orders in process.

The rubber industry reports a 45 per cent increase in the number of tires sold during 1939, but the corporations commonly known to the public as tire manufacturers report only a 20 per cent sales increase. Prices declined approximately 6 per cent, however, and many tire manufacturers produce a variety of other products.

Non-Ferrous Metals. Smelters' and refiners' sales up 21 per cent. Brisk demand during the latter months of the year appears to have depleted stocks by about 1 per cent. According to trade observers, copper, lead, and zinc stocks were all reduced. Fabricators and processors of non-ferrous metals, making such products as tubes, sheets, lighting fixtures, automotive parts, and other items, reported a 32 per cent increase in sales, 10 per cent in stocks.

For makers of jewelry and silverware, sales up 26 per cent, stocks up only 4.

Tobacco. The tobacco industry maintained its reputation for stability, but showed less marked growth than has been common in past years. Sales up 2 per cent for a group which includes practically all large cigarette producers. Tax records indicate an increase of 5 per cent in the number of cigarettes sold, 3 per cent in the number of cigars; prices may have averaged somewhat lower.

Construction

Total contract construction in 1939 was 12 per cent better than in 1938, according to reports received from almost one thousand contracting concerns, some 4 per cent of the industry in dollar volume. Index figures for previous years and dollar estimates of 1939 receipts from contracting have not been attempted. The increased construction financed in recent years by government funds may have been reflected only in part by the experience of the reporting concerns. The unreflected portion is presumably handled by contracting firms organized since 1935, the most recent year for which complete official figures were compiled.

Among the individual groups, electrical and plumbing and heating contractors recorded the best 1939 sales gains, 18 per cent; painting and decorating contractors turned in the least impressive report, an increase nevertheless of 9 per cent.

Service Trades

Sufficient information is available for estimates for twelve service trades. Combined receipts were up 6 per cent, based on reports from 1,100 concerns with total receipts in 1938 of some 70 million dollars. Altogether 65 per cent of the service establishments increased their business in 1939, true also for not less than 50 per cent of the concerns in each trade studied.

Receipts of laundries and of cleaners and dyers behaved very much alike in 1939, showing increases of 3 per cent and 4 per cent, respectively. Shoe repairing, and blacksmith and welding shops were the only trades with receipts reduced, both very slightly.

A sample of 47 year-round hotels report increased business of 3 per cent, identical with the estimate made independently by trade observers from an analysis of a considerably larger sample.

Commercial trucking continued to stride forward in freight transportation, revenues up 16 per cent. Moving and storage concerns, in a closely associated field, increased receipts only 2 per cent.

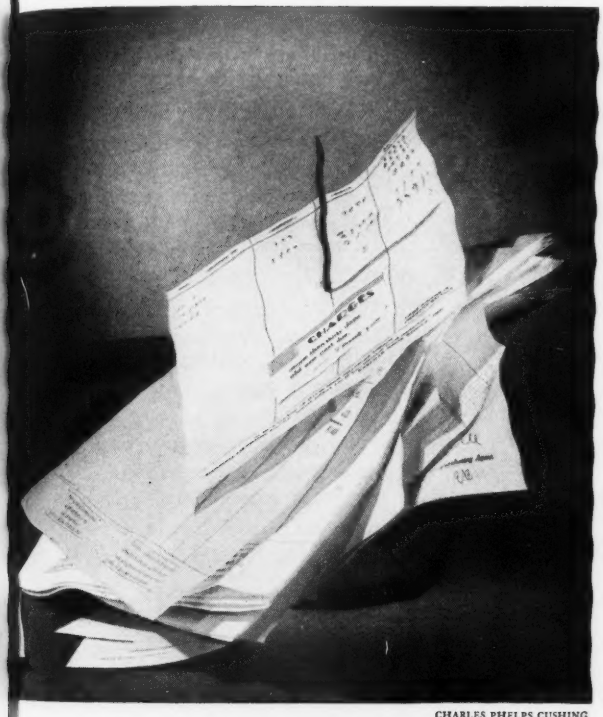
Service and repair trades, with the exception of shoe repairing previously mentioned, show moderate increases, especially electric, radio, and other repair shops, which report a 14 per cent gain in receipts. Garages and other automotive service establishments did not match either the very favorable 26 per cent sales increase of motor vehicle dealers or even the more modest 11 per cent gain registered by automobile accessory and parts retailers. Garage receipts advanced 7 per cent.

VII. Trends of Service Receipts, 1938-1939

SERVICE TRADES	Trend 1938 to 1939 Per Cent Change	1939 Receipts (Estimated) Millions of Dollars
Cleaners and Dyers	+ 4	139
Laundries	+ 3	529
Shoe Repairing	0	139
Year-Round Hotels	+ 3	757
Blacksmith and Welding Shops	— 1	47
Funeral Directors and Embalmers	+ 3	265
Photographers	+ 6	70
Garages and Other Automotive Service	+ 7	634
Moving and Storage	+ 2	135
Commercial Trucking	+16	816
Electric, Radio, and Other Repair Shops	+14	32
Upholstery and Furniture Repair Shops	+10	44
TOTAL, 12 SERVICE TRADES	+ 6	3,607

VALUATION *or* HISTORICAL COST: SOME RECENT DEVELOPMENTS

GEORGE O. MAY
Partner, Price Waterhouse & Company



CHARLES PHELPS CUSHING

MANY of the difficulties and uncertainties of accounting are attributable to the application of two different principles in the balance sheet, that of historical cost and that of valuation, and to the use of at least two different principles in the preparation of the income account: (1) that of accrual, under which come broadly not only the treatment of interest, rents, and taxes, but also provisions for depreciation, amortization, etc.; and (2) that of the completed transaction (which determines when income from sales, for instance, is brought into account). And finally the balance sheet and income account have in some way to be tied together.

The use of the different principles is born of necessity and it is therefore inescapable. It is, however, one of the major problems of the profession, I think, to make clear why different principles are employed and in what circumstances each is properly applicable.

There is great value in a closer mutual understanding between economists and accountants; and, therefore, at the risk of seeming to flog a dead horse, I shall restate some of the reasons why balance sheets are not, and should not be, purely statements of values, but are to a considerable extent based on cost.

Oscar Wilde defined a cynic as a man who knew the price of everything and the value of nothing. We accountants are, I am afraid, in the position of the cynics. We know, or can find out, something about prices; we are less able to determine values.

In common usage (whatever the language of economists) a price is the amount of money for which something can be bought or sold. It may be a buying price or a selling price; it may or may not coincide with value. An event having no bearing on the value of a share of capital stock may affect the market price of that stock 5 per cent or 10 per cent in an hour. This discussion will consider the *prices* at which inventories are taken rather than the amounts at which they are valued.

It is not necessary to attempt to set forth in detail here the bases on which different assets are commonly stated in the balance sheets of going corporations. During 1939, however, a development occurred which is of substantial importance in itself and also significant in its bearing on the use of historical cost or valuation in the balance sheet.

In the Revenue Act of 1939, Congress authorized employment of the "last-in, first-out" method of inventorying. The outbreak of war and the resulting rise in prices make it probable that this method will be availed of to a greater extent than would otherwise have been expected. The right to adopt this method is conditioned in the act on the employment of no other method by the corporation in any other accounting report. This provision seems to indicate a congressional point of view sharply different from that of Chairman Frank of the Securities and Exchange Commission.

If this language were interpreted literally the development would be of very great significance, because it would mean that every corporation adopting it would be required to carry its inventory at cost determined on the "last-in, first-out" basis, even if that cost were in excess of market. However, the report of the Senate committee on the bill seems to make it clear that Congress did not intend to prohibit the

The discussion in this article was included in a speech delivered at the University of Michigan School of Business Administration, in November, 1939, and reported in the February, 1940, number of *Michigan Business Papers*, "Proceedings of the Fifteenth Annual Michigan Accounting Conference."

continued use of the time-honored, if illogical, method of carrying inventory in the balance sheet at cost or market, whichever is lower.

The great merit of the "last-in, first-out" method is that it tends to flatten out the curve of earnings in periods during which prices successively rise and fall. Most accountants would agree that to this extent it is meritorious. Whether it results in a more accurate reflection of income is, however, open to question. It may do so in the case of merchandising companies which keep relatively stable stocks and purchase replacements as goods are sold. If the corporation has on hand an article for which it paid $10, sells it for $20, and immediately purchases a similar item for $15, it is perhaps proper and conservative to regard the gross profit realized as being $5 instead of $10.

Similar considerations apply in the case of corporations which habitually carry large stocks of substantially identical raw materials for use in manufacturing processes, but in this case the basic stock method is, perhaps, more appropriate and more effective than the "last-in, first-out" method. However, in the case of corporations which, when they make a sale contract, as a rule contract also for the raw materials necessary for its performance, the appropriateness of the method is less apparent; indeed, in such cases, where the last goods received are high-priced raw materials which have been acquired in connection with high-priced sales contracts on which deliveries have not yet been made, the employment of this method will result in understatement of income.

The Treasury regulations to give effect to the new rule have not yet been issued, but it is interesting to observe in a recent article on the Revenue Act of 1939 the statement that in discussions between interested taxpayers and the Treasury one point raised was that purchase and sales commitments should be included in inventory determined on a "last-in, first-out" basis when they are necessary to balance accurately current costs against current sales.

If this principle is adopted in the regulations, the case just mentioned would presumably be one to which it would be applied. It must be recognized that the line between inventory and commitments is often a narrow one, and the question of disclosure of commitments is one which will call for more consideration in the near future than it has received in the past—particularly if emphasis is to be placed on the use of accounts for the purpose of foreshadowing the profits of the immediate future. One great difficulty is, of course, that frequently what are called sales contracts are, in practical effect, no more than buyers' options and will not be enforced if the market falls.

Turning now to consideration of the method as it affects the balance sheet, if the last goods purchased are deemed to be the first used or sold, the figure carried forward in the inventory will, of course, reflect the cost of earlier purchases, and as time passes the inventory will come to reflect a price level of an increasingly remote period.

The possible effects may be illustrated by considering the case of a company formed to take over a previously existing business and acquiring an inventory at current costs at the date of its formation. So long as the volume of sales and inventory remain approximately the same, the inventory to which the "last-in, first-out" rule is applied will continue to be carried substantially at the price level existing at the formation of the company. Only to the extent that the inventory increases will it be carried at a price level of a later date.

To study the fluctuation of price levels of a period in the past is to see how crucially important may be the date of initiation of the inventory practice. For instance, if we assume a rubber company to have been formed and to have applied the "last-in, first-out" rule from its formation, and further assume for the sake of simplicity that its inventory today is the same in quantity as at the date of its formation, we find that that inventory would be carried at something in the neighborhood of 10 cents a pound if the company were formed in 1930; 6 cents a pound if it were formed in

POWER PLANT ON THE HARLEM RIVER, NEW YORK CITY—H. ARMSTRONG ROBERTS

either 1931 or 1933; 3½ cents a pound if it were formed in 1932; and 13 cents if it were formed in 1934.

It is apparent that this constitutes a striking extension of historical principle in inventory valuation. It is apparent, also, that unless accompanied by explanations, the inventory figure will have a far less definite significance than an inventory taken at cost on the "first-in, first-out" basis.

This brings up the question which has been raised in the past in the case of those companies which employ the basic stock method or the "last-in, first-out" method, whether the value of the inventory at replacement prices should not be indicated on the balance sheet. Those who still look on the balance sheet as of substantial, if not primary, importance will certainly make such a demand, and some, whose interest is mainly in the income account, will urge that the information should be given so that those who desire to do so may restate the accounts on the "first-in, first-out" basis, which in the past has been the prevailing one.

Measure of Value

It may be answered that the value of the business is determined by its income; that the income is best measured on the basis of the most recent costs; and that the replacement value of an inventory which must be substantially maintained so long as the business is conducted has no more practical bearing on the value of the business than the replacement value of the plant itself. It seems likely, however, that the demand for some supplementary information will prevail.

Where companies which in the past have employed another method of determining cost now adopt the "last-in, first-out" method, the auditor has an interesting question to consider in regard to that part of the certificate which states whether accounting principles have been consistently maintained. The common practice, where any substantial change in the method of application of a general principle has taken place, as in this case, is to indicate whether the results shown for the year have been appreciably affected, and if so, to what (approximate) extent.

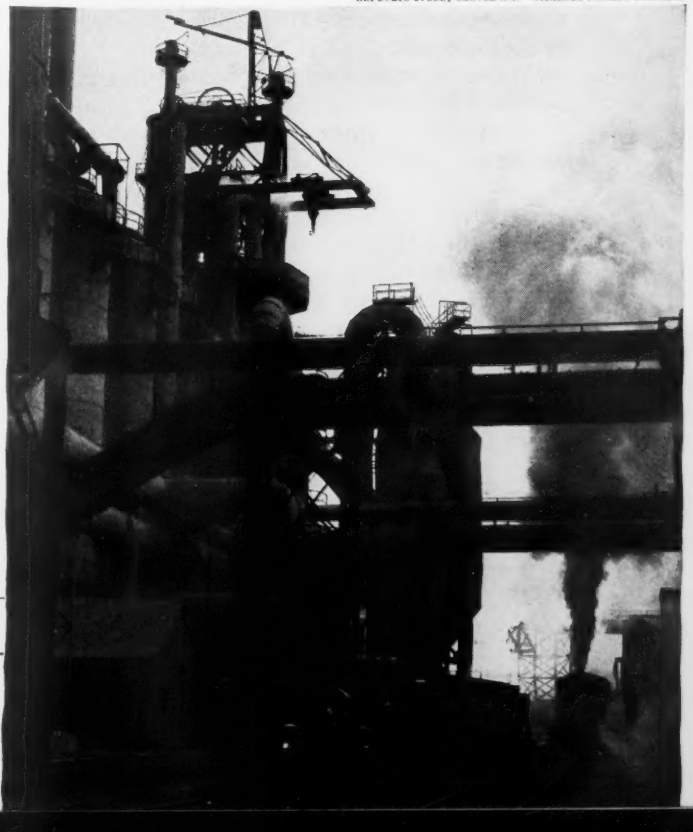
Obviously, the effect can be measured in one of two ways—either by considering what would be the result if the inventory at the beginning were placed on the same footing as that at the end of the year, or by measuring the difference between the results of applying the two methods respectively to the closing inventory. Since prices near January 1, 1939, were relatively stable and there was a considerable rise in prices during the latter part of that year, the difference shown by making the change as at the first of the year will as a rule be much smaller than the difference between the results of applying the two methods of pricing at the close of the year. Provided the method of computation is clearly disclosed, that which results in the smaller figure is to be preferred, since there are sure to be some wishful thinkers who will add this difference to the profits shown for the year to arrive at the earnings of the company.

Having now discussed the direct significance of this development and some of the problems to which it gives rise, I propose next to consider an important implication to be drawn from it. If it is in conformity with good accounting principles that inventories should be taken at the prices paid for *similar* goods at various times in the perhaps distant past, *a fortiori* it must be in conformity with the requirements of good accounting that fixed assets should be carried at the prices paid for the *actual* property at various times in the past. Thus, the adoption of the "last-in, first-out" method for inventories lends strong support to the use of the historical cost basis for fixed properties.

The suggestion is sometimes made that balance sheets should reflect current values and the belief is sometimes entertained that they do. In my judgment, the reasons why balance sheets do not and should not attempt to reflect values of fixed values are irrelevant. The most plausible argument for making the attempt is that the information would be valuable to the person who is contemplating buying or selling capital stock of a corporation; let us therefore consider the question from the standpoint of such a person.

It is a common error to assume that valuation is practicable because it is possible to compute the cost of replacement and to make an estimate of accrued depreciation. This assumption, however, begs the main question. Think of the plants which you know best. If they did not exist as they are, where they are, and under the management which controls them, would it be economically wise to create them substantially as they are, where they are, and under that management? In any case in which you cannot confidently answer "yes" to that question, the replacement cost, less depreciation of the property, is not a measure of its value.

REPUBLIC STEEL, CLEVELAND—CHARLES PHELPS CUSHING



WEST STREET, N. Y.—H. ARMSTRONG ROBERTS

In the second place, the value, if ascertained, would be irrelevant. What the investor is interested in is the value of the enterprise in which he is acquiring an interest as a whole; and the cases in which the value of the enterprise would even approximate the figure arrived at by valuing the assets separately and deducting the liabilities, are negligible.

If an enterprise is profitable, its value will be determined mainly by consideration of its earning capacity and the probability of that earning capacity being maintained. In computing this value, one factor may be the investment which any competitor in the business would have to make in order to be in a position to secure a part of the business of the corporation. But the figure that is significant for this purpose is not the cost of replacement of the property which the corporation has, but the probable cost of installation of equipment which would best serve the same purpose. From this standpoint, therefore, the cost of replacement of the existing plant is irrelevant.

Often Overlooked

If, on the contrary, an enterprise is unprofitable, its value depends mainly on two factors: first, the liquidating value of the assets, and, second, the degree of probability that liquidation will take place. The latter is often overlooked. I once read—I forget where—that a distinguishing characteristic of the bourgeois mind is an unwillingness to cut losses, and all of us can recall many cases in which assets have been dissipated for years in unprofitable operation before a management was found wise enough to throw up the sponge.

The point at which replacement price might conceivably be relevant is when the charge against gross income for exhaustion of property is being determined. The weight of argument is in favor of the charge against income for depreciation and depletion on the basis of historical cost as against the alternative of computing them on the basis of current replacement prices. Nevertheless, there is a more plausible argument for the use of replacement prices to measure the charge against income than there is for using these prices as a basis for carrying the assets in the balance sheet.

If the view is accepted that the primary purpose of the accounts of a corporation is to throw light on the reasonableness of the prices at which its securities are quoted on the market (which may be said to be the objective stated by Chairman Frank, translated into severely practical terms), it may be questioned whether replacement cost is, in theory, even the second choice. The significant figure to the investor is the effective cost of the property to him.

Take, for example, the simplified case of a mining company whose mine stands on its books at exactly the same figure as its capital stock, its other assets and its liabilities being exactly equal. If the par value of the stock is $1,000,000, represented by 100,000 shares of $10 each, then the corporation as such will provide for depletion on the basis of a cost of $1,000,000. Assuming that 5 per cent of the ore is exhausted in one year, then the corporation will make a depletion charge of $50,000 or 50 cents a share. If, however, an investor buys stock in the mine at $50 a share, he must treat an additional $2 a share out of dividends which he receives as being a return of capital to him—in other words, his true income must be based on recognition of the fact that the effective cost of his interest in the mine to him is $50 per share, not $10.

This principle is universally recognized and applied in the common case of iron mining companies, the whole of whose stocks has been acquired at a premium by steel companies. In this simple instance the principle is not only clearly sound but easy of application. In more complex situations it will be impracticable of application but none the less valid in theory.

Depreciation Bases

Examination of the balance sheets of corporations and the market prices of their stocks, however, will show clearly that in many cases the effective cost figure will vary greatly from the replacement cost of the corporation's property. Sometimes depreciation based on replacement cost of a plant would actually exceed depreciation on cost because of increase in construction costs, but depreciation based on effective cost to the stockholder would be the lowest of the three because the

(Continued on page 49)

BUSINESS FAILURES *in the* FIRST QUARTER

—more than in 1937, fewer than in 1938, 1939

AN ANALYSIS OF THE RECORD OF INDUSTRIAL AND COMMERCIAL FAILURES

THE recent trend of industrial and commercial failures has been of critical interest. Would they, or would they not, in the first quarter of 1940, drop to the previous low level of the first quarter of 1937?

According to the trend of DUN'S Insolvency Index, adjusted for seasonal variation, failures at the beginning of 1937 were at their lowest point since the all-time low in 1920. Following the business break in the late Summer of 1937, failures rose rapidly, reaching a high in June, 1938. During the balance of 1938 failures rapidly declined again, and during 1939 monthly fluctuations caused but a slight change in the general trend until November, when a sharp three-months' fall carried failures again to a low point. In February the adjusted index rose three points, and whether or not the current quarter's failures would drop to the 1937 level depended upon the number of failures in March.

KEYSTONE VIEW

The actual number of failures reported in March totalled 1,197 in comparison with 1,042 in February, and with 1,322 a year ago. The discussion of correct trends, however, must be in terms of the insolvency index, for the difference of five working days between February and March causes the comparison of actual figures to be misleading. The index corrects for the varying number of working days in the month, and, further, relates the number of failures to the number of concerns in business. The index for March converts the seeming increase into a drop of 4.3 points, from 66.7 in February to 62.4 in March. These numbers mean that in March there were 62.4 failures for every 10,000 concerns in business compared with 66.7 in February for every 10,000 concerns.

Based on February to March changes in the index over a period of 50 years, a decline of about 12 per cent is normal. The current decline of 6 per cent failed, therefore, to equal the normal, and the index, when adjusted for the expected seasonal change, rose 3.2 points, from 58.0 in February to 61.2 in March. This 3.2 point rise in the adjusted index following a 3.4 point rise in February brings the first quarter of 1940 to an end on a rising movement, with total failures missing by some 5 per cent the low level of the corresponding quarter of 1937. They were, however, 25 per cent below the first quarter of 1938 and 15 per cent below the first three months of last year.

The trend of current liabilities has been consistently downward since the

INDUSTRIAL AND COMMERCIAL FAILURES

	Number of Failures				Current Liabilities *Thousands of dollars*				Dun's Insolvency Index† Unadjusted				Dun's Insolvency Index† Adjusted‡			
	(New Series)		*(Old Series)*		*(New Series)*		*(Old Series)*		*(New Series)*		*(Old Series)*		*(New Series)*		*(Old Series)*	
	1940	1939	1939	1938	1940	1939	1939	1938	1940	1939	1939	1938	1940	1939	1939	1938
Jan.	1,237	1,567	1,263	1,377	15,279	20,790	19,122	21,415	67.1	86.0	69.3	76.2	54.6	69.9	56.3	62.0
Feb.	1,042	1,202	963	1,149	13,472	13,582	12,788	21,028	66.7	78.0	62.5	75.2	58.0	67.8	54.3	65.4
Mar.	1,197	1,322	1,057	1,167	11,681	19,002	17,851	40,325	62.4	72.6	58.1	64.8	61.2	71.9	57.5	64.2
Apr.	....	1,331	1,064	1,172	....	18,579	17,435	21,147	...	73.1	58.5	65.1	...	71.0	56.8	63.2
May	....	1,334	1,028	1,123	....	15,897	14,664	19,139	...	70.5	54.3	59.8	...	69.8	53.8	59.2
June	....	1,119	847	1,073	....	12,581	11,460	15,918	...	66.5	50.3	64.1	...	69.3	52.4	67.5
July	....	1,153	885	1,038	....	14,999	14,128	14,761	...	63.0	48.3	57.2	...	70.8	54.3	64.3
Aug.	....	1,126	859	1,015	....	12,637	11,259	16,382	...	61.4	46.8	53.8	...	72.2	55.1	63.3
Sept.	....	1,043	758	866	....	10,545	9,402	14,341	...	59.0	42.9	51.6	...	70.2	51.1	61.4
Oct.	....	1,234	916	997	....	17,464	16,140	13,219	...	67.0	49.7	54.7	...	72.8	54.0	59.4
Nov.	....	1,184	886	984	....	13,201	11,877	12,302	...	72.6	54.3	53.9	...	69.8	52.2	51.8
Dec.	....	1,153	882	875	....	13,243	12,078	36,528	...	65.0	49.7	56.7	...	64.3	49.2	56.1
Total	....	14,768	11,408	12,836	....	182,520	168,204	246,505	...	69.6	53.7	61.1	...	...	...	...

† Apparent annual failures per 10,000 enterprises. ‡ For seasonal variation.

beginning of the year, totalling in January $15,279,000, in February $13,472,000, and in March $11,681,000. A drop of 39 per cent from the $19,002,000 a year ago, compared with a 10 per cent drop in numbers, was due in large measure to fewer large failures at the present time.

The conversion of March and February failures in the various industry groups to a daily basis wipes out the apparent increases over February and reveals decreases in each main group; 14 per cent in manufacturing, 2 per cent in wholesale trade, 4 per cent in retail trade, 30 per cent in construction, and 9 per cent in commercial service. With a 12 per cent drop normal for total failures, it is evident that trade and service failures kept the general level up.

Industry Groups

The appreciable decline in manufacturing failures as a group was due principally to food, leather, and machinery lines. Failures in textiles, fuels, and paper and printing products were slightly off, balanced by slight increases in forest products, chemicals and drugs, and iron and steel products.

In wholesale trade a falling off in the number of failures in foods, clothing, and automotive products was counteracted by increases in dry goods, lumber and building materials, and drugs.

In retail trade, furniture and household furnishings and general stores contributed to the net decline of 4 per cent, but increased numbers of failures in foods, building materials and automotive products and drug stores, kept the normal decline from materializing.

Comparison of March failures with those a year ago can be made directly:

Industry Group	Number of Failures March 1940	March 1939	Per Cent Change
Manufacturing	216	267	−19
Wholesale Trade	123	143	−14
Retail Trade	740	792	− 7
Construction	63	56	+12
Commercial Service	55	64	−14
Total	1,197	1,322	−10

Total March failures were 10 per cent below those of a year ago, and according to the table at the left, the greatest improvement was in manufacturing lines and the least amount of change in retail trades. The lines of business most responsible for the favorable position of manufacturing were textiles and machinery, in both of which failures were cut in half. Food failures were down slightly. Failures in the other lines were practically unchanged from a year ago.

In retail trade, failures in the two most important lines, foods and apparel shops, were only slightly changed

Failures by Divisions of Industry—March, 1940 and 1939

(Current liabilities in thousands of dollars)

	Number			Liabilities		
	Mar. 1940	Feb. 1940	Mar. 1939	Mar. 1940	Feb. 1940	Mar. 1939
Total United States	1,197	1,042	1,322	11,681	13,472	19,002
Manufacturing (total)	216	204	267	4,336	4,939	8,264
Foods	49	56	56	911	1,167	3,302
Textiles	36	38	72	620	453	1,767
Forest Products	28	17	26	659	427	771
Paper, Printing and Publishing	19	19	18	267	856	194
Chemicals and Drugs	12	7	8	342	290	56
Fuels	4	4	3	107	249	755
Leather and Leather Products	8	13	11	242	247	115
Stone, Clay, Glass and Products	7	6	8	93	112	155
Iron and Steel	11	6	14	477	30	315
Machinery	8	11	17	54	548	344
Transportation Equipment	6	1	4	190	214	145
All Other	28	26	30	374	346	345
Wholesale Trade (total)	123	102	143	1,340	1,863	2,273
Farm Products, Foods, Groceries	38	35	56	524	503	1,022
Clothing and Furnishings	7	10	5	59	92	23
Dry Goods and Textiles	6	3	4	47	24	117
Lumber, Building Materials, Hardware	15	9	13	199	310	343
Chemicals and Drugs	8	2	6	66	7	79
Fuels	1	2	2	50	43	11
Automotive Products	8	8	12	91	76	73
Supply Houses	9	6	16	50	83	138
All Other	31	27	29	254	725	467
Retail Trade (total)	740	622	792	4,585	4,440	6,081
Foods	227	173	232	984	957	1,105
Farm Supplies, General Stores	23	24	16	143	203	91
General Merchandise	42	33	35	269	189	357
Apparel	157	136	165	878	918	1,396
Furniture, Household Furnishings	29	47	60	319	364	732
Lumber, Building Materials, Hardware	39	27	39	236	228	392
Automotive Products	47	34	54	379	303	528
Restaurants	95	84	90	826	688	580
Drugs	40	30	47	205	389	318
All Other	41	34	54	346	201	582
Construction (total)	63	66	56	668	1,655	1,232
General Contractors	20	9	5	316	549	120
Carpenters and Builders	4	13	14	13	315	664
Building Sub-contractors	38	40	35	306	480	397
Other Contractors	1	4	2	33	311	51
Cleaners and Dyers, Tailors	55	48	64	752	575	1,152
Cleaners and Dyers, Tailors	10	11	9	139	124	60
Haulage, Buses, Taxis, etc.	16	12	19	235	223	663
Hotels	4	5	1	126	59	5
Laundries	9	1	7	145	2	126
Undertakers	2	2	6	9	18	57
All Other	14	17	22	98	149	241

in number from a year ago. Failures were even higher in some lines: general stores, general merchandise, restaurants. A sharp drop was evident in house furnishings.

The amount of liabilities owing at the time of failure is our best available indication of size of concern. During March there was, on a daily basis, an increase in number of failures over the February daily record only in the very small concerns with debts less than $5,000. These were for the most part small retailers. In all the other size groups there were fewer failures, particularly among the very large concerns with liabilities of $100,000 and over. In spite of the longer March, only 10 large failures were reported in comparison with 16 in February.

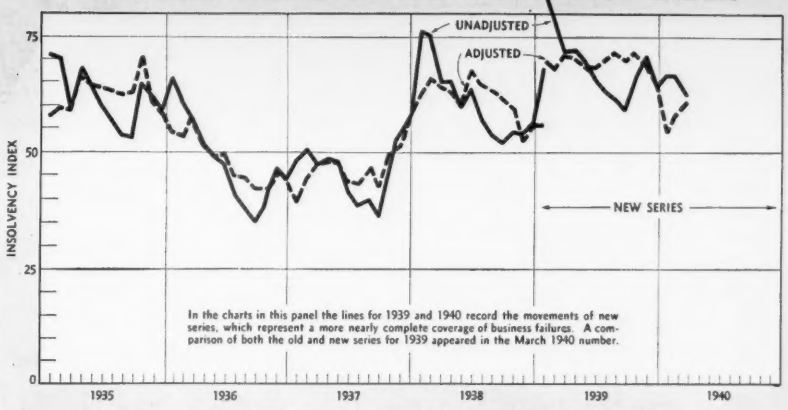
Small Failures

Compared with the record a year ago, it was again only the very small failures that were in excess at the present time, although together the two smaller size groups, including all failures with liabilities under $25,000, increased their percentage of the whole only from 90 per cent a year ago to 92 per cent in the current month. Very large failures were cut in half, with all industry groups contributing to the cut.

Size of Liabilities	March 1940	March 1939	Per Cent Change
Under $5,000	659	637	+ 3
$5,000–$25,000	434	554	−22
$25,000–$100,000	94	111	−15
$100,000–$1,000,000	10	20	−50
Total	1,197	1,322	−10

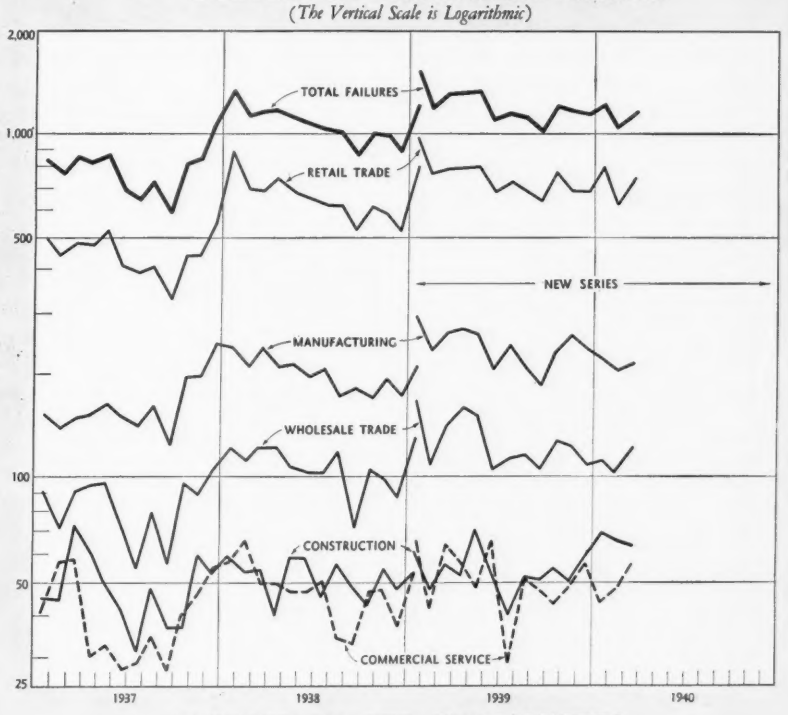
No well-defined geographical pattern emerged from the picture of March failures. Running contrary to the normal downward trend for the country as a whole, failures increased in New England, in the Midwest Federal Reserve Districts of Cleveland and Kansas City, and in the West Coast district of San Francisco. Other sections of the country experienced fewer failures than in February, with New York, numerically the most important district, reporting a daily lessening of 14 per cent. Reports indicated also that failures in the larger cities as a whole tended to

MONTHLY TREND OF THE INSOLVENCY INDEX


UNADJUSTED
ADJUSTED
INSOLVENCY INDEX
75
50
25
0
NEW SERIES
In the charts in this panel the lines for 1939 and 1940 record the movements of new series, which represent a more nearly complete coverage of business failures. A comparison of both the old and new series for 1939 appeared in the March 1940 number.
1935
1936
1937
1938
1939
1940

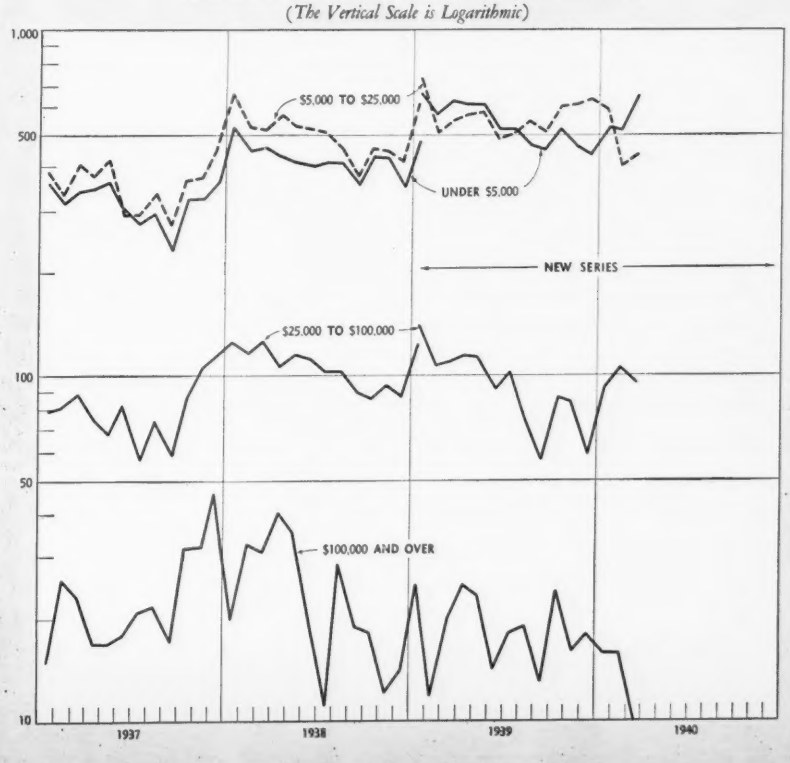
FAILURES BY INDUSTRIAL GROUPS

(The Vertical Scale is Logarithmic)



FAILURES BY SIZE OF LIABILITIES

(The Vertical Scale is Logarithmic)



increase in March, (although New York City failures showed no increase), whereas failures diminished in the sections outside the largest cities.

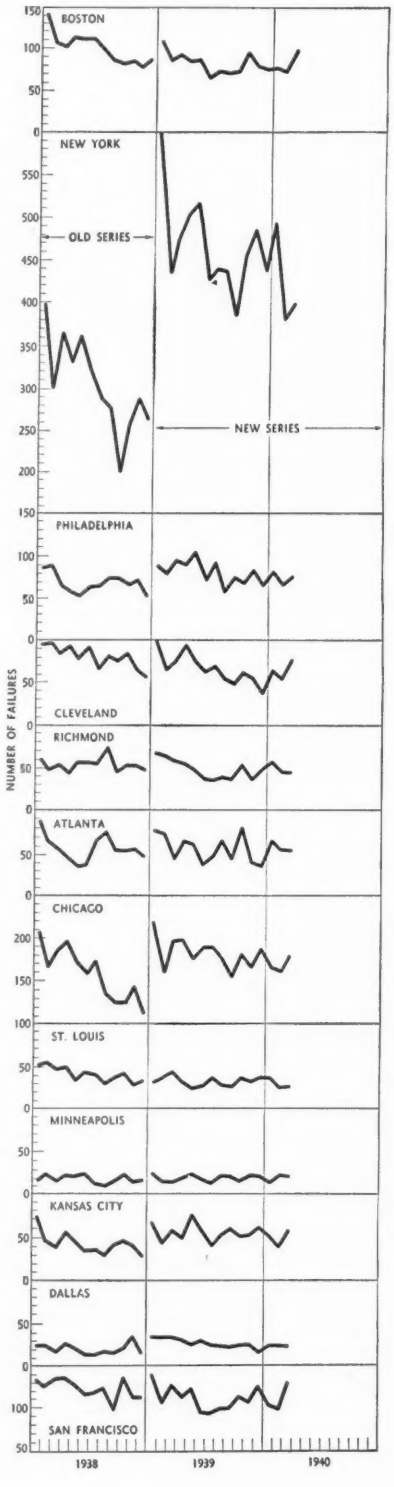
Quarterly Failures

Total failures for the quarter just passed were 15 per cent below those of the corresponding quarter of 1939. The following tables present breakdowns of the quarterly failure record and indicate a remarkably balanced decline throughout the industry groups, with the exception of construction, and throughout the size groups. Geographically, failures were down over the whole country, although least in the Northwest as indicated by only a 2 per cent drop in the Minneapolis district. The Boston, New York, and Philadelphia regions declined similarly, about the average amount.

Industry	Jan.-Mar. 1940	Jan.-Mar. 1939	Per Cent Change
Manufacturing	643	799	−19
Wholesale Trade	337	419	−19
Retail Trade	2,151	2,537	−15
Construction	198	164	+21
Commercial Service	147	172	−15
Liabilities			
Under $5,000	1,710	1,888	−10
$5,000–$25,000	1,431	1,788	−20
$25,000–$100,000	293	358	−18
$100,000 and over	42	57	−26
Federal Reserve Districts			
Dallas	68	104	−35
Richmond	148	192	−23
St. Louis	92	113	−19
Cleveland	196	241	−19
New York	1,271	1,508	−15
Philadelphia	224	264	−15
Boston	246	286	−14
Kansas City	150	172	−13
Chicago	505	578	−13
Atlanta	177	198	−11
San Francisco	339	374	− 9
Minneapolis	60	61	− 2
Total	3,476	4,091	−15

For the purpose of the Dun & Bradstreet failure records a failure is defined as "a concern which is involved in a court proceeding or a voluntary action which is likely to end in loss to creditors." The following division of the quarter's failures into the various types may be of interest in the way of providing an over-all picture of the activity continually going on on the unhappy side of the business field:

Industrial and Commercial Failures by Federal Reserve Districts



	Per Cent
Voluntary bankruptcy—usually leading to liquidation	32
Assignments—assets transferred to creditors	21
Concerns forced out of business by foreclosure, attachment, etc., with resulting loss to creditors	13
Voluntary discontinuance with loss to creditors	12
Involuntary bankruptcy—usually leading to liquidation	8
Arrangements under Chapter XI —adjustment of unsecured debts	5
Receivership—usually eventual liquidation	5
Compositions—voluntary adjustment with creditors out of court	3
Reorganization under Chapter X —adjustment of both secured and unsecured debts	1
Total	100

Canadian Failures

Canadian failures in the first quarter of 1940 varied but slightly in either number or amount of liabilities from those in the corresponding quarter of 1939, totalling 352 with liabilities of $3,248,000 from January to March of this year, in comparison with 340 with liabilities of $3,280,000 a year ago. In March, 111 failures were reported with $867,000 debts, compared with 105 in February with $894,000 debts, and with 99 a year ago with liabilities of $1,099,000.

Total failures for the quarter tended to exceed those a year ago in the less populated sections of the Dominion rather than in the cities. In only 5 of the 16 largest cities were there additional failures this year, Montreal increasing from 102 to 115, and Ottawa from none a year ago to 5.

EVERYDAY USE *of* COLOR *in* BUSINESS

of a system for selecting colors and of its application, especially in merchandising, to color problems

ARTHUR S. ALLEN

Colorist and Designer; formerly President of the American Institute of Graphic Arts

LET'S put color on the handle of our new product—the 1940 combination hammer-and-screwdriver. A color which contrasts with the steel-gray of other tools, or with the natural-wood color of other tool-handles, will help distinguish it in a tool box. Easier to find, carpenters will like it. Maybe we'll sell more. What color?

Let's put the new 1940 hammer-and-screwdriver in a two-color package which will stand conspicuous on hardware store shelves—and thus help to get it bought and into tool boxes. What colors?

And while we are thinking about it, maybe we ought to review the way we have been using color in our magazine advertising, in our trade-marks, on our company trucks. Can't we make each use of color add its weight cumulatively to the force of all our advertising, by causing each to have a family resemblance to the other? But what family? And again, what colors?

Colors and Emotions

Purple, we think has royal connotations. Blue calms our nerves, restores vitality. Red stands for courage. Pure yellow for cheerfulness and prosperity. But not invariably.

Another purple may suggest misery; another blue, cold; another red, carnage; another yellow, sickness or cowardice. Black very surely represents tragedy and death. Still, in the Orient white is the color of mourning, which any American company setting up a chain of white-front restaurants would soon discover.

Out of human experience running back beyond record, back perhaps even to tribal superstitions and taboos, have come color associations without number. Because of them a color is pleasant or unpleasant; for a given purpose, suitable or unsuitable.

When we combine two or more colors these same associations, together with the immediate physical effects of the colors on our nervous system, tell us that we like the combination or dislike it. This "we" is less universal than democratic. It stands only for a majority of us, and the majority favorites may vary from country to country.

Rules of Thumb

Working with such hunches as these, most often subconsciously, artists and artisans colored their drawings, houses, tools, clothing, and ornaments for hundreds of years. Gradually they evolved a few rules about color combinations and color opposites, but little more. Only in comparatively recent years have there evolved systems for color use and identification of any exactitude, systems which recognize human color associations as important qualifications, but not as basic postulates.

Meanwhile the number of applications of color in business, especially in packaging and advertising, has mounted steeply and continuously. But though they have demonstrated the increasing need for organization of color knowledge, the very intensity of the need has nourished poor efforts along with the good.

Much, if not most, of the commercial art of today is prepared with the same careless flourish or puttering mumbo-jumbo which for centuries has characterized color work. And why not? Even in a commercial setting, dollars and hours are only dollars and hours, but Art is Art. Or is it?

Among color systems, one notable for its completeness and precision is that devised by the late Albert H. Munsell, a Boston artist with a respect for the scientific method, an acquaintanceship which included internationally known physicists, and an inventive gift. He invented a portable daylight photometer which proved to be of considerable value not only in the measurement of colors, but also in the standardization of railroad light signals. With the help of the color system he devised, commercial artists have been able to attain consistently good—and profitable—results, and usually with economy both in time and materials.

Color, to be sure, is not the sole element in successful commercial art. Design is important. So is the proper mating of color and medium; in ink, some colors retain their original hue on one paper, fade on another. But assuming competent attention to these two elements, the Munsell system can produce excellent results—as it has already.

Old and New

Published not long ago, a handbook titled *100 Packaging Case Histories,* presented a series of pictures and paragraphs comparing old and new packages for the same products. Six of the 100 new packages were by a designer who uses the Munsell system. No other designer had more than three packages

chosen for illustration in the book.

One of the six new packages was for General Electric's Mazda lamps. An important change was a brighter color —especially desirable because of the very nature of the product. Being brighter, moreover, the area of color surface was reduced, resulting in a saving in cost.

Another was the wrapper for Kingan & Company's hams. The four, sometimes five, colors in the trade-mark were reduced to two better-chosen ones, again at a saving, $17,000 in the first year. In ten years, sales of Kingan's hams in the new package have increased more than 100 per cent. The same trade-mark now appears on Kingan's trucks and on signs on its buildings.

Simpler, Brighter

A new package for Listerine toothpaste, simpler in design, brighter in color, was adopted in 1938. Sales in 1939 were reported running considerably ahead of 1938.

The fourth was for Lever Brothers Lifebuoy soap, probably the first package redesign done, designed so long ago (the same package has been retained ever since and has sold as many as 2,000,000 units a week) that it is impossible to ascribe to the package any given part of the 300 per cent increase in sales. The history of the fifth package, for Minute Tapioca, has been almost identical.

For the sixth, Underwood Company's line of soups and other food products, a Munsell-chosen red and two shades of blue replaced three colors which had included an expensive gold printing. The old labels last appeared in 1937. By 1939 sales had increased about 50 per cent.

It is interesting to see that in the system which was relied upon for the choice of colors in these six packages there is the same orderliness and mathematical simplicity with which scientists have been able to bound most other branches of the physical sciences long before this.

Precise color opposites can be determined by "after-image." If you gaze intently at a red card for ten seconds and it is then snatched away, for a moment you will see a color which is blue-green. If you next put the red and blue-green on a color wheel in areas inversely proportionate to the brightness of the colors and then whirl the fan at high speed, you will see neither red nor blue-green, but a neutral gray. They are color opposites, pleasing together to the eye.

Great painters have had an instinctive sense of color combination. Almost at random one can choose a celebrated painting, measure the areas and intensities of the several colors, duplicate them on a color wheel, and when it spins find that the mixture is uncannily close to a five-value gray (a gray fifth in order in nine shades from near-white to near-black—absolute pure white or black cannot be obtained). Or if the colors of the painting (neighboring colors and not opposites) do not spin out to a middle gray, almost surely will they blend into a five-value of the major color—meaning that the artist intuitively has achieved a choice of colors which balance out to a pleasing middle shade, as Aristotle, impressed by the value of the golden mean, would have predicted centuries before.

This, in a word, is the greatest merit of the Munsell system. With it, the many who must work with color and who are not geniuses may achieve by formula color effects which only the gifted few can produce without it.

Color has three dimensions—hue, value, and chroma—which fully and accurately describe any color as the three dimensions of a box describe its size. "Hue" is the quality by which we commonly distinguish one color from another, as red from a yellow, a green from a purple. "Value" is the quality by which we distinguish a light color from a dark one. But with these two qualities one cannot describe a color completely. We may say of a flower that it is red and that it is light, and we may say of a brick that it is of the same shade of red and also light. Yet there

How the Old Order Changes

THE REDISIGNED PACKAGES ON PAGE 29

Underwood—Neglected though he had been, the devil had become a well-known trade-mark, was promoted to a conspicuous position. To identify the several products: different colors on each label.

Minute Tapioca—Removing broad borders caused same-sized package to look considerably bigger.

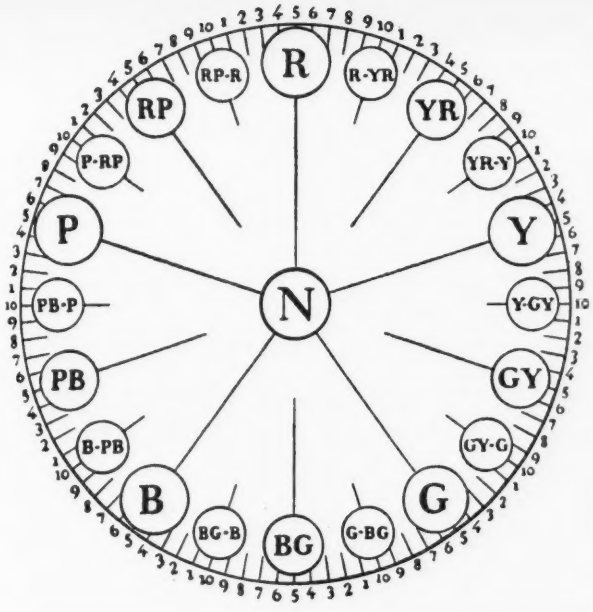
Cuplets—Both name of product and illustration are prominent against backgrounds of opposite colors: Colors are reversed in top and bottom panels, hence one background is in opposite color to the other.

Lifebuoy—Simple in design and using neighboring colors, this package was redesigned 30 years ago, has stayed redesigned ever since. Simplicity also distinguishes the new tin for *Dill's Best.*

Franklin—A cleaner, brighter blue, next to a brilliant red. Inks were developed to provide, so far as practicable, identical results in printing also on kraft and manila paper bags, corrugated boxes, and cotton and burlap bags.

Morton—Gold printing was replaced by yellow, less expensive and blue's opposite color.

Packer's—Appropriate to the product, bubbles made up the background design, in high values of yellow and green. Medallion and bottom panel were done in low values of green. For *Kre-mel,* too: light to dark shading of a single color.



Representing about as fine a variation as even a trained eye can distinguish, the five principal hues (red, yellow, green, blue, and purple) and the five intermediate hues have been further subdivided in the Munsell system into ten divisions for each. The hundred hues are so arranged that a pair of color opposites are always directly opposite each other across the circle. Thus is N (neutral gray) in the center, for it is neutral gray which is the resultant of opposite colors mixed together.

may be a decided difference between their colors. The flower is strong in color, the brick weak, or *grayer*.

This *grayness* is the key to how the three dimensions of color (shown in their respective scales at the top of the color plate on the following page) are combined in the color tree in the middle of the illustration. In the color tree only a segment of red appears, at the four-value of darkness. If all the chromas at all values of red (upper right, following page) were included they would fill out an elongated, pie-shaped segment extending vertically from two to eight in value. And if all chromas at all values of colors were included in all the other pie-shaped segments, the color tree would become more nearly a sphere.

Actually, this sphere would be somewhat irregular and lop-sided. In the first place colors differ by nature in their maximum chroma strength, some being much more powerful than others. The strongest red pigment used, for example, is approximately twice as powerful as the strongest blue-green pigment, and the red pigment will therefore require a correspondingly greater number of steps on a longer path to reach gray. Thus at red, the sphere would bulge out farther. Secondly, all colors do not reach their maximum chroma strength at the same level of value. The strongest yellow pigment is by nature much lighter, or higher in value, than the strongest blue pigment; the complete chroma paths of these two colors will therefore touch the neutral pole at different values, or altitudes.

Actually, too, the five principal hues and their complements, the five intermediate hues, may be infinitely subdivided (chart above). Each of the ten hues has been further divided into ten subdivisions, about as many as even a trained eye can distinguish. In the Munsell system the numerals run from one to ten, *five* always marking one of the ten principal or intermediate hues and *ten* always falling between them. The yellow of the color chart becomes 5Y, yellow green-yellow becomes 10Y.

Values, as we have seen, run from one to nine; chromas from one outward, however far in intensity colors have been found. Value is expressed by a numeral above a diagonal line, chroma by a numeral below the line. Thus the outermost red on the color tree would be symbolized by 5R $^{5}/_{14}$. More practical and more definite, isn't it, than the vague and variable terms borrowed from the animal, mineral, and vegetable kingdoms—plum, olive, copper, fawn, mouse, and so on—of which no two persons have quite the same idea?

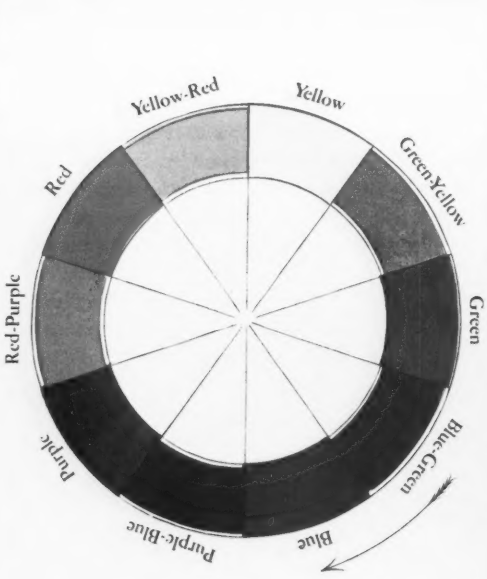
For Loans, Too

By such symbols are measured colors which are so precise that bankers lend money on them. Out of a Munsell-guided color laboratory come printed specimens of yellow, for example, which are printed in a food industry publication. The color matches grapefruit juice of a certain Department of Agriculture grade. A canner seeking a loan on his inventory of grapefruit juice demonstrates by matching juice and colored paper the value of his stock. Similar color samples have been used to demonstrate grades and values of prunes, oranges, tomatoes, peas, and even toasted crackers, whose shade of brown reflects the amount of heat used in baking.

Contrast

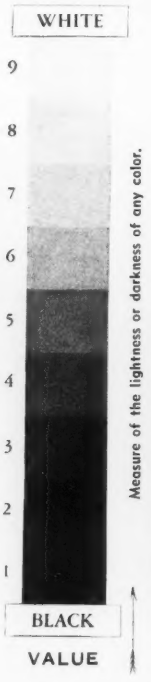
In the use of two or more colors, contrast in value is extremely important. Value contrast will make lettering, for example, legible or illegible. A color of middle value will be least distinguishable on another color of equal value; the greater the contrast in value the better the legibility.

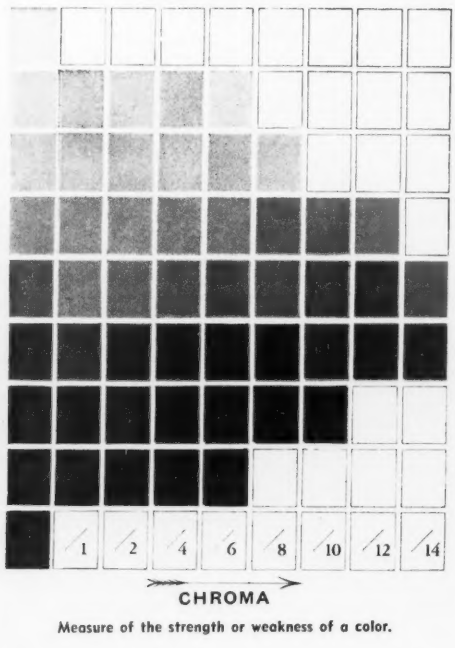
Maximum contrast is obtained by the use of colors of extremely strong chromas if they differ sufficiently in value from black or white, or one another. Some examples of this form of contrast would be a yellow of extreme chroma on a black; a low value purple-blue on white; a strong yellow on dark blue.



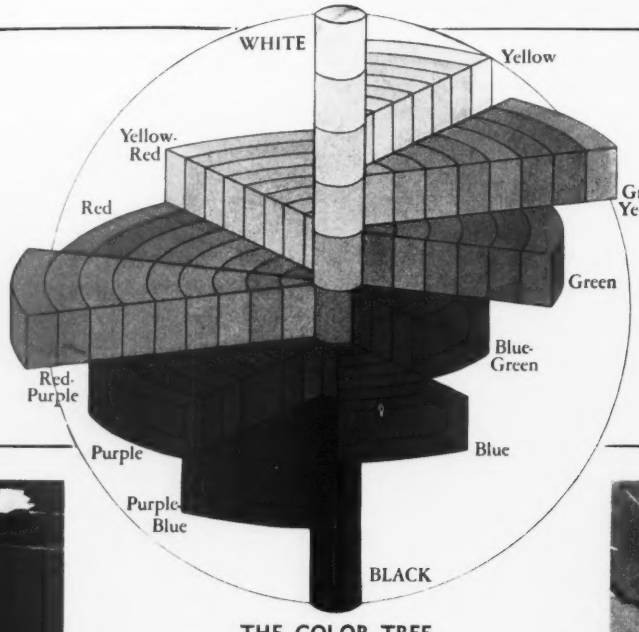
HUE

Quality that distinguishes one color from another.





At the right is a projection showing the Principal and Intermediate Hues arranged radially in ten equal divisions about the vertical scale of Value in the same order as the Hue circle above. For simplicity, Hues are shown only at the Value in which they reach their strongest Chroma. A complete Tree would show each Hue developed completely from black to white, as shown in the red Chroma chart above.



THE COLOR TREE

Example 1

(1)
Purple-blue with grey and small areas of the complementary yellow. Note the yellowish hue of the grey, a result of simultaneous contrast.

Example 2

(2)
A free use of a number of complementary hues, purples and green-yellows predominating.

COLOR MEASUREMENT

Developed by the late Albert H. Munsell, the Munsell color system recognizes three dimensions of color—hue, value, and chroma. They form an irregular solid, as the color tree suggests. This page reproduced by the courtesy of the Encyclopædia Britannica, Inc., from the forthcoming edition.

COLOR APPLICATION

With the Munsell color system as a guide in the selection of color opposites and of harmonious neighboring colors, Arthur S. Allen has designed and redesigned scores of readily recognized packages. Notes on the principles which were followed in redesigning these packages appear on page 26.

The accomplished artist uses value contrast instinctively—a dark against a light, a light against a dark. By it alone he can accomplish to some degree the effect of distance and a third dimension.

It is also useful to know the relative powers of colors. A strong yellow on a field of black is an excellent example of maximum visibility. It is attributable mainly to the extreme contrast and the power of yellow. The power of a color may be measured as the product of its value number times its chroma number. A yellow-red at its present extreme chroma would be YR $^{7}/_{13}$, with a product of 91; the strongest red, R $^{4}/_{14}$, has a power product of only 56.

Monochromes

The simplest use of color is the monochrome, one hue alone used in its many combinations of value and chroma. Some of the pleasantest color harmonies are to be found in neighboring colors in their sequence on the hue circle. We may want to use half of the circle keeping within the cool hues from the blue-green to red-purple, or within the warm hues from red to green. A good example of the latter is a doughnut package just being completed for Town Talk Bakers, Worcester, Mass. The package carries a picture of a doughnut in its natural color and a border decoration in a second, neighboring color, red yellow-red.

Complementary color schemes offer great varieties of color relationships. When complementary colors are used together they have the effect of making each other more brilliant. This phenomenon was put to work in the redesigning of a package for Cuplets, a food product manufactured in New Brunswick by Flako Products Company. For the panel carrying the word Cuplets was chosen a grayish yellow background, so that the blue rendering of the work stood out prominently. If one color of a pair of complementaries is weakened in chroma (intensity), the other will appear still brighter by contrast. Complementary pairs (and more than one pair in a single composition) may be used in all the steps from high to low value and strong to weak chroma.

Complementary colors are opposite each other on the hue circle. Yellow, for example, is the complement of purple-blue; equally so, we can balance yellow with a separate area of purple and another area of blue.

To determine how large an area of one color we need to balance how much of its complement (to attain the artist's five-value gray), we make use of their power numbers. The power number of a certain yellow, Y $^{7}/_{9}$, may be 42; of an opposite purple blue, PB $^{6}/_{6}$, 36. Our remaining problem is simply to balance 36 parts (in area) of yellow against 42 parts of purple blue. This is based on the principle that colors will balance if the areas presented are inversely proportional to the product of their power numbers. Seemingly technical, it means simply that a strong color, and a high value color, should be used in a small area and a more neutral, darker color in a larger area.*

Two valuable aids in achieving a balance of colors mathematically are a cabinet of colored sheets of paper, each marked with its value and chroma numbers, and a planimeter, a device which measures the area covered by irregularly shaped figures.

With the Munsell principle and these two tools, one of the largest advertising agencies in the country is saving time, materials, and tempers—and attaining excellent results. No more does an artist dabble all day between countless trips up and down the corridor, as he tries to match in water colors a yellowish green that the art director has in his head. Shorter are the conferences over how much of one color and how much of another are to appear in a layout.

Much the same methods have been used in recoloring designs on tablecloths manufactured by Sherwin Brothers. The new renderings have outsold the old.

In the floor-covering trade, too, many designs have endured year after year, unchanged except in coloring. The custom has been to print 20 or 30 colorings of the same design, reject most, retain five or six. Now, as followed for Congoleum-Nairn, the procedure is to make only five or six colorings, in advance determining and maintaining the relationships of values and chromas in such a way that one coloring will be quite as good as another.

These principles are equally valid in coloring packages, whether for the prize-winning, single design packages for Listerine's toothpaste, shaving cream, and other products, or for the Beech-Nut tomato soup package which reproduces a picture of a red tomato amid green leaves, or for Underwood labels whose different colors identify the several products.

Useful are they too in standardizing colors for Sears, Roebuck & Company all through its operations, from the time that it submits Munsell-chosen color samples to manufacturers, to the day when a customer uses the mail-order catalogue. On one page in the back of the catalogue are 300 numbered color patches. Colored merchandise is described by number throughout the other pages, printed less expensively in black and white.

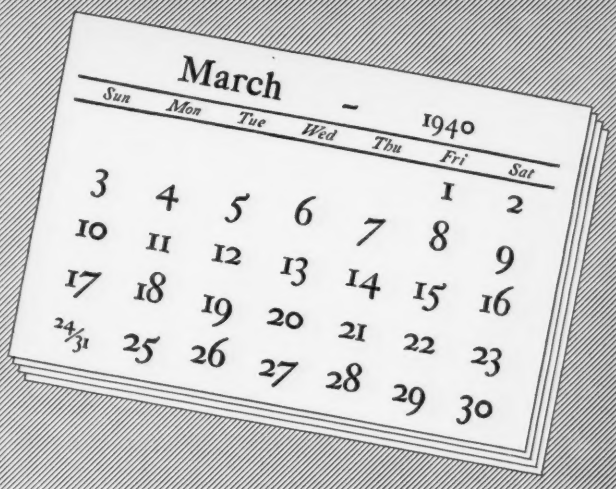
Distribution Costs

As we have been reminded repeatedly, recently by the Twentieth Century Fund's study of distribution costs, production has become relatively standardized and its costs greatly reduced; but much less has this been true of distribution. Especially as it is used in packaging and advertising, color must be considered a distribution cost. As color comes to be used more and more, a systematic approach to its use, as through the Munsell system, not only grows more important as a means to attaining better results, but increasingly it has the further merit of attaining them economically. Thus it contributes its part to reducing distribution costs and expanding national income.

* A more complete exposition of Munsell color principles appears in *A Color Notation*, by A. H. Munsell, Munsell Color Company, Baltimore, Md.

ING OF VAASA, FINLAND—ACME

BUSINESS DIARY



Event of the Month

After week of hush-hush negotiations, defiant Finns capitulate amid débris, many crying preference for a new Thermopylæ.

During the Month

Prolonged magnetic storm begins Easter day. Business indexes lower. . . . Ides of March pass in relative calm. . . . Welles comes home.

6 Unfinished *S.S. Queen Elizabeth* joins three of largest Allied liners in war-time retirement at New York. . . . TNEC, reporting that prices since war have been stable, says, "In recent months business statesmanship has reached a new high."

12 Russo-Finnish war ends; Karelia, Ladoga, Viborg, and sub-Arctic area ceded to Soviets.

14 State Department assents to establishment April 14 of $100,000,000 Inter-American Bank for promotion of trade and financial stability in Western Hemisphere.

18 AAA survey indicates U. S. farmers will not increase 1940 crop acreage in anticipation of war boom. . . . Investment Bankers' Association sends a questionnaire reply 65 pages long to SEC, urging a review of laws causing prolonged stoppage in capital market, abolition of "arms-length bargaining" rule. . . . Mussolini and Hitler meet at Brenner Pass. . . . TNEC extends inquiry to State trade barriers. . . . Atlas Corporation to transfer $36,500,000 of general stock holdings to Curtiss-Wright in merger, Atlas stockholders taking aircraft firm stock; special stockholdings such as RKO to be managed by a new Atlas Corporation.

19 James H. R. Cromwell, U. S. Minister to Canada, lauds Allies, chides United States isolationists; causing national commotion.

20 Spring comes. . . . *Mauritania* quits New York anchorage for secret destination, *Queen Mary* not far behind. . . . French cabinet resigns day after 300 of 540 deputies abstain from vote of confidence.

21 Secretary of Treasury says at press conference that $50,000,000,000 debt openly arrived at would not worry him; that Government Savings (baby) Bonds will be sold after April 1 to individuals only; that $2,000,000,000 currency stabilization fund should not be diverted to other purposes except in national emergency.

22 New French cabinet survives when vote of confidence shows majority of one, 111 not voting. . . . Johns-Manville stockholders authorize annual salaries for board of directors.

23 FCC suspends order allowing limited commercial sponsorship of television after September 1, saying big price cut in RCA television sets violates its recommendation for further product research before developing market. . . . Early Alaskan population census figures running 30 per cent ahead of 1929 count.

24 Earliest Easter since 1818, but in 2225 A.D. the holiday will fall on March 22. . . . Terrific magnetic storm caused by sunspots turns communication systems topsy-turvy.

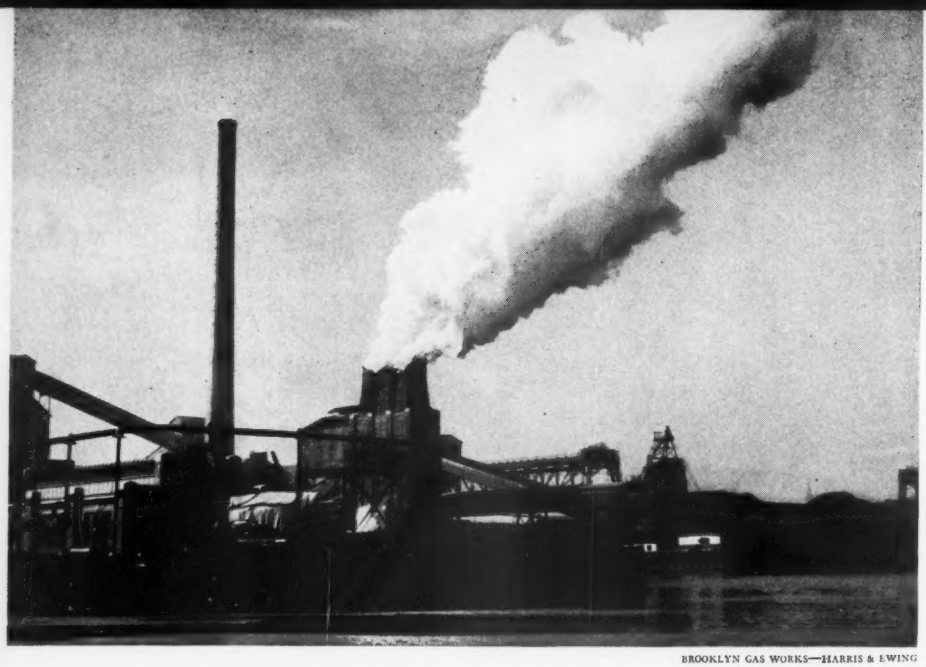
25 U. S. Supreme Court unanimously rules Ethyl Gasoline Corporation cannot exercise patent monopoly to control commodity in hands of licensed jobbers or to control jobbers' business practices. . . . Court also holds anticipated economic injury from competition is not, of itself, factor limiting FCC issuance of broadcast station licenses.

26 Mexico voids title of three American chicle corporations to 1,500,000 acres of land; firms cannot claim expropriation compensation. . . . Federal District Court in D. C. rules labor union not immune to anti-trust laws. . . . U. S. Steel surprises many by voting $1 dividend at routine directors' meeting. . . . Domestic airlines celebrate year without serious accident. . . . SEC Commissioner George C. Mathews resigns for public utility job.

28 Anglo-French supreme war council says the two nations will work together "in all spheres" after the war.

29 In plumbing supply field 102 are indicted at Cleveland by Federal Grand Jury: "maintain uneconomical marketing system." . . . Philadelphia: Federal District Court rules worker may sue employer in Federal Court for wages due under Wage and Hour Law and may inspect his payroll record in employer's books. . . . Federal judge in New York reverses Internal Revenue Commissioner's ruling that Texas Company must pay social security taxes on employees of a distributor whose contract required special reports, equipment, and option to buy plant.

30 Brazil resumes payment on city, State, Federal debts. . . . British ship Iranian crude oil to Japan in 1,000,000-barrel deal.



BROOKLYN GAS WORKS—HARRIS & EWING

THE TREND OF BUSINESS

PRODUCTION . . . PRICES . . . TRADE . . . FINANCE

Although there has been no definite turn in the production trend, a few signs of improvement in business activity are apparent. Among these are an increase in new orders to manufacturers, a strengthening of commodity prices, and an upturn in commercial borrowing. Retail trade expanded during the first part of April, but tended later to level off as unseasonable temperatures persisted.

A QUICKENING of buying interest coincided with the beginning of April and in some respects the business trend for the month has turned out to be the most cheerful so far this year.

The increased covering in metals, paper, leather, and textiles has lent support to the view that, under present world conditions, inventory policies are being directed not toward liquidation but toward preserving a margin of protection against delivery delays and sudden price changes. The reaction of sensitive markets to the abrupt end of the European stalemate has also proved encouraging to those who feared a repetition of the disorderly markets and price dislocations of last September.

As far as production activity is concerned, there is as yet no concrete evidence of a change of trend. Preliminary reports indicate, however, that the seasonally-adjusted index of output for April was unchanged from the March level or at the most off one or two points —which would be the smallest drop this year. For the first time in months, order backlogs in some industries have increased rather than diminished; consumption has been about as large as production, halting the expansion in stocks; and commodity prices have made a decisive move upward.

On the financial front, too, a few signs of renewed life have appeared. New capital markets in mid-April enjoyed one of their busiest weeks in more than a year; commercial loans show a good seasonal expansion; and demand-deposit turnover has increased slightly from the near-record low of February.

The flow of income to consumers remains well above the level of a year ago, despite a scaling-down since December. Retail trade is also better than in 1939, with gains most pronounced in automobile lines. The dollar volume of exports in March was about one-third greater than a year ago.

Industrial activity: By March the seasonally-adjusted FRB index of production (charted on the opposite page) was back to the level of last August, having declined 25 points or 20 per cent from December.

The type of industrial series included and the statistical correction for seasonal variation in the FRB index tend frequently to overemphasize fluctuations in total industrial activity. There is some evidence that this has been the case in recent months. The aircraft industry, which continues to show spectacular gains in orders and output, is not directly included in the index. Nor is the machine tool industry, which has been operating at practical capacity for the past four months. Nor is the rayon industry, which has recently maintained a steadier pace than either the silk or woolen industries which do have direct representation.

The Federal Reserve Board itself estimates that more complete coverage would show total industrial activity in March still 5 to 10 per cent higher than last Summer.

Despite a further moderate curtailment in some lines of manufacturing during April, available statistical evidence indicates that activity has been sustained well above the pre-war level. In key industries such as paper, cotton textiles, and steel, order backlogs have been bolstered and production shows a steadier tendency. Paper board manufacturers reported incoming orders during the second and third weeks of April

at the best rate since October; sales of more than 130,000,000 yards of cotton print cloths in the first half of the month were equal to approximately eight weeks' production; steel orders were estimated close to 55 to 60 per cent of capacity, compared with 45 to 50 per cent a month earlier.

Consumer income: A seasonal increase in trade and agricultural activity during March helped to halt the rise in unemployment. Non-agricultural workers are estimated to have increased by 165,000. While the index of factory payrolls remained virtually unchanged, cash farm income was sharply lower, and total income payments showed less than the usual increase. The total of $5,936,000,000 paid out this March compared with $5,727,000,000 in March a year ago.

Lower food and fuel prices in March bolstered consumer purchasing power. Living costs were reduced approximately 0.3 per cent, the purchasing value of the dollar being estimated at 117.0, compared with 116.6 in February and 117.8 in March 1939 (NICB).

Consumer buying: Expenditures increased by about the usual seasonal amount in March, after allowance was made for the early date of Easter. The FRB index of department store sales held unchanged at 89, compared with 88 last March. The more-inclusive DUN'S REVIEW index, which makes no adjustment for the Easter factor, was 95.9 in March, 91.2 in February, and 86.3 a year ago. More cheerful than reports from other types of retail stores were sales figures of the automobile trade, which despite adverse weather conditions showed an increase in March of 20 per cent over last year (Automobile Manufacturers' Association).

Foreign trade: Merchandise exports continued to afford considerable support to domestic business activity. Dollar volume showed slightly less than the usual increase from February to March, but held a gain over last year of 30 per cent. Heavy exports of metals, chemicals, and aircraft still accounted for the bulk of increase in total exports.

Industrial Production

Federal Reserve Board Adjusted Index
1923-1925 = 100

	1937	1938	1939	1940
January	114	80	101	119
February	116	79	99	109
March	118	79	98	103
April	118	77	92	
May	118	76	92	
June	114	77	90	
July	114	83	101	
August	117	88	103	
September	111	90	111	
October	102	99	121	
November	88	103	124	
December	84	104	128	

Factory Payrolls

U.S.B.L.S. Index
1923-1925 = 100

	1937	1938	1939	1940
January	94.6	75.3	83.7	98.3
February	100.1	77.5	86.0	97.8
March	105.9	77.6	87.6	97.9*
April	106.7	74.9	85.5	
May	110.1	73.2	85.0	
June	107.6	71.1	86.5	
July	105.2	71.1	84.4	
August	108.7	77.3	89.7	
September	104.9	81.6	93.8	
October	104.9	84.2	101.6	
November	93.3	84.4	101.6	
December	84.6	87.1	103.6	

* Preliminary

Department Store Sales

Federal Reserve Board Adjusted Index
1923-1925 = 100

	1937	1938	1939	1940
January	93	90	88	92
February	95	88	87	89
March	93	86	88	89
April	93	83	88	
May	93	78	85	
June	93	82	86	
July	92	83	86	
August	93	83	89	
September	94	86	91	
October	93	84	90	
November	91	89	95	
December	89	89	96	

Wholesale Commodity Prices

U.S.B.L.S. Index—1926 = 100

Week	Jan. 1940	Feb. 1940	Mar. 1940	Apr. 1940
I	79.5	78.8	78.4	77.6
II	79.5	78.5	78.3	78.0
III	79.3	78.3	78.2	
IV	79.1	78.6	77.9	
V			77.9	

Industrial Stock Prices

Dow-Jones Index (Weekly Average)

Week	Jan. 1940	Feb. 1940	Mar. 1940	Apr. 1940
I	151.88	145.56	146.38	149.53
II	148.45	147.39	147.64	150.01
III	145.54	148.50	147.54	147.98
IV	146.17	147.90	146.48	
V			147.05	

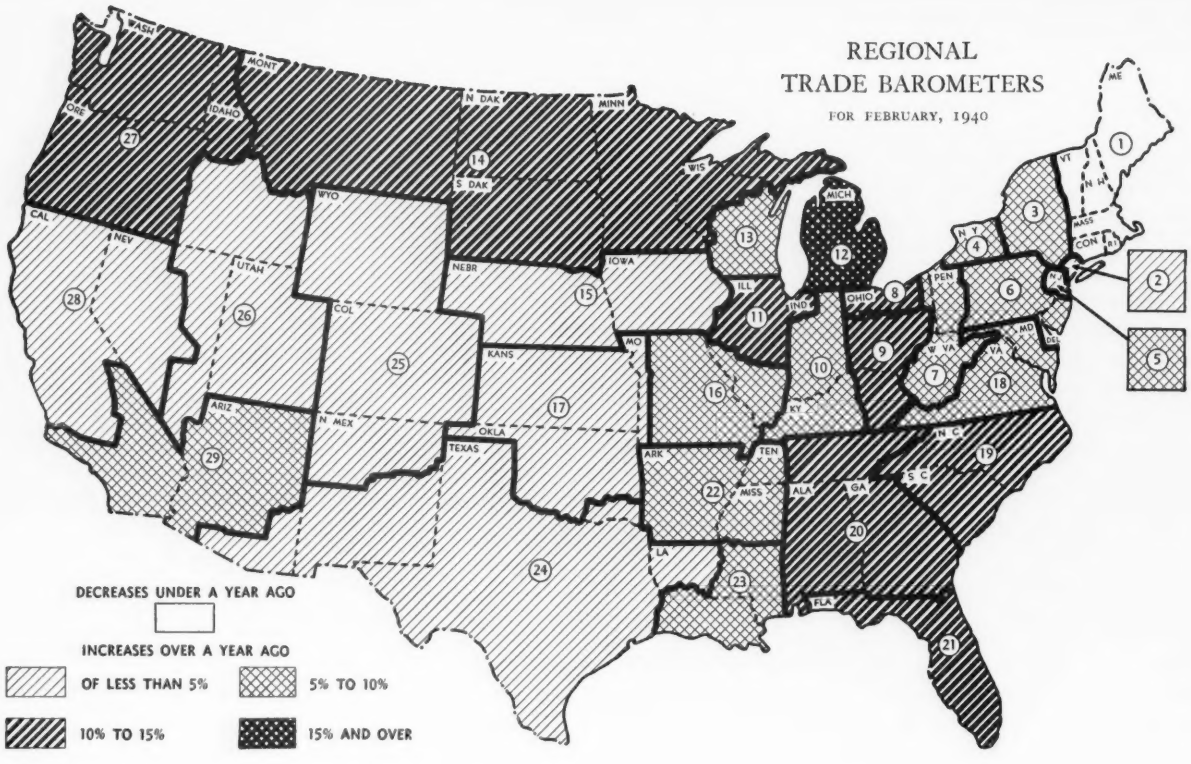
Prices: Commodity price averages recorded their first significant upturn so far this year during early April. The USBLS weekly wholesale price index went from a low of 77.6 at the beginning of the month to 78.5 for the third week, more than cancelling the loss during March. The sensitive daily price index compiled by USBLS reached a two-and-one-half month high of 117.4 on April 18, comparing with the low of 112.0 in the first week of April.

After moving ahead during the latter part of March and early April, the Dow-Jones industrial stock price average dropped back in the middle of the month, although not so far as the March low. Trading was heavier with price movements still relatively narrow.

Bank credit: Commercial, industrial, and agricultural loans of the reporting banks in 101 cities reached a new peak for the year at $4,430,000,000 in the week ended April 17. Although the highest for any period since January 1938, loans of this type were still 10 per cent under the recovery high in 1937. Demand deposits adjusted continued ahead to a new all-time record, the latest report showing $19,655,000,000, or $3,036,000,000 more than a year ago.

A steady inflow of gold was primarily responsible for a further spectacular increase in excess reserves, the total as of April 17 being estimated at $6,050,000,000, a new high and $2,052,000,000 above last year at this time.

Capital issues: New corporate security issues placed in March were in the smallest volume since last November (*The Commercial and Financial Chronicle*). At $134,877,000, financing amounted to little more than half the February total. Preliminary reports for April, however, indicate a sharp increase in flotations to about the highest total for any month since the start of the war.



TRADE VOLUME SWELLS

The United States Trade Barometer rose to 95.9 (preliminary) in March from 91.2 in February. Barometer figures are compiled by Dr. L. D. H. Weld, Director of Research, McCann-Erickson, Inc.; trade information is reported by the branch offices of DUN & BRADSTREET, INC.

SENSITIVITY to weather conditions was as much a characteristic of retail trade in the first part of April as it had been in March. Volume expanded when the weather was good, contracted when it was poor, but on the whole managed to forge ahead of last year's comparative totals. Movement of seasonable items—clothing, housefurnishings, curtains, upholstery, garden tools, etc.—quickened somewhat after the slow start caused by lingering cold weather. In the third week of the month, special clearances and promotional events aided in the continuation of the improved rate of turnover.

It was estimated that consumer buying averaged 2 to 11 per cent higher for the country as a whole than during the first three weeks of April last year. The highest increases over last year, particularly in seasonal apparel volume, were obtained in regions in the South, the Southwest, and along the Pacific Coast, where the weather more nearly approached that which is normally expected in the month of April.

March results were about as spotty as early reports had predicted, but only in New England and Pacific Coast regions did sales in some weeks fall below year-ago volumes, according to preliminary reports. Demand was quite generally concentrated on apparel and Easter novelties; furniture departments experienced the usual post-February slump.

During March the week-to-week gains over 1939 varied between 3 and 16 per cent. In almost every region there was a drop during the last week of the month, following the Easter holiday. Increases in the Middle West and the South were generally broader than in other parts of the country. The United States Trade Barometer, which is adjusted for seasonal variation and for the number of business days in each month, but not for the changing date of Easter, jumped 4.7 points or 5.2 per cent above the February

figure to a level of 95.9 (preliminary). March, 1937, excepted, this is the highest for any March since 1931. The increase over March, 1939, was about 11 per cent, as compared with a year-to-year margin of 8 per cent in February.

Regional figures for February were practically unanimous in showing gains over the same month in 1939. Only New England, with a 5 per cent decrease, was below the previous February level. Largest gains were noted in the South Atlantic and North Central sections of the country. Nine regions reported increases of more than 10 per cent, but Detroit alone registered a gain of more than 15 per cent.

Only seven of the twenty-nine regions—Cincinnati and Columbus, Detroit, Iowa and Nebraska, Atlanta and Birmingham, Salt Lake City, Portland and Seattle, and San Francisco—experienced an expansion in consumer buying between January and February. None of the twenty-two decreases amounted to more than 8 per cent, however, and fifteen were less than 5 per cent. The average decrease for the entire country was about 4 per cent, although the gain over a year ago widened from 4 to 8 per cent.

(Charts and trade reports for each region begin on next page)

THE MAP AND CHART compare the February, 1940, indexes with those for the same month a year ago. The column at the extreme right of the chart indicates the relative importance of the regions: the figures are percentages of national retail trade from the 1935 Census of Business.

THE INDEXES for the regions are charted, with U. S., from 1928, on pages 36-39. They are composites based on: bank debits (Federal Reserve Board), department store sales (Federal Reserve Board), new car registrations (R. L. Polk & Company), and life insurance sales (Life Insurance Sales Research Bureau). In regions 2, 3, 4, 5, and 14, wholesale sales (Department of Commerce), and in region 2, advertising linage *(Editor and Publisher)*, which were found to make those indexes more accurate, are included. In region 15, department store sales have been omitted. Each index is separately adjusted for seasonal variation and for the number of business days in each month. All are comparable. The monthly average for the five years 1928-1932 equals 100. The preliminary figure for the United States is computed one month before regional figures are available.

THE PARAGRAPHS printed opposite the 29 regional charts quote figures for February based on samples of department and retail stores reporting to the Federal Reserve banks; for March and for the first half of April based on opinions and comments of business men in various lines of trade, gathered and weighed by the local DUN & BRADSTREET offices.

REGIONAL TRADE BAROMETERS

	REGION	Feb. 1940 Regional Index	Feb. 1940 Compared with Feb. 1939 (%)	Retail 1935 Sales %
			−10 0 +10 +20 +30	
	U. S.	91.2	+ 8.9	100.0
1.	NEW ENGLAND	80.2	— 5.0	7.8
2.	NEW YORK CITY	74.8	+ 2.9	10.3
3.	ALBANY AND SYRACUSE	93.8	+ 8.3	2.6
4.	BUFFALO AND ROCHESTER	82.8	+ 8.8	1.9
5.	NORTHERN NEW JERSEY	82.9	+ 7.1	2.9
6.	PHILADELPHIA	83.4	+ 8.3	6.2
7.	PITTSBURGH	91.1	+ 9.9	3.7
8.	CLEVELAND	97.3	+13.0	2.9
9.	CINCINNATI AND COLUMBUS	105.2	+12.8	3.1
10.	INDIANAPOLIS AND LOUISVILLE	101.9	+ 9.2	2.6
11.	CHICAGO	94.0	+14.5	6.4
12.	DETROIT	99.6	+18.9	4.0
13.	MILWAUKEE	97.9	+ 7.2	2.2
14.	MINNEAPOLIS AND ST. PAUL	101.9	+12.8	4.5
15.	IOWA AND NEBRASKA	84.5	+ 3.8	3.0
16.	ST. LOUIS	89.6	+ 6.7	2.5
17.	KANSAS CITY	89.8	+ 2.7	3.6
18.	MARYLAND AND VIRGINIA	104.4	+ 5.2	3.8
19.	NORTH AND SOUTH CAROLINA	113.3	+11.7	2.1
20.	ATLANTA AND BIRMINGHAM	128.1	+12.8	3.5
21.	FLORIDA	124.1	+10.8	1.3
22.	MEMPHIS	100.6	+ 9.2	1.5
23.	NEW ORLEANS	99.8	+ 5.9	1.0
24.	TEXAS	116.5	+ 4.5	4.5
25.	DENVER	100.2	+ 3.2	1.3
26.	SALT LAKE CITY	98.6	+ 2.3	.8
27.	PORTLAND AND SEATTLE	97.3	+11.2	2.7
28.	SAN FRANCISCO	91.7	+ 3.6	3.4
29.	LOS ANGELES	91.7	+ 5.3	3.9

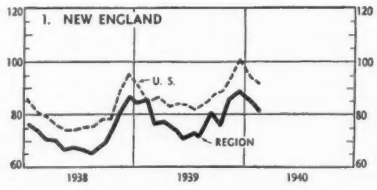
THE REGIONAL TRADE BAROMETERS

These indexes of consumer purchasing are corrected for seasonal variation; the monthly average for the five years 1928-1932 equals 100 (see preceding page). Charts showing the curves since January, 1928, were published in the March, 1940, number and will appear semi-annually. Additional information about the indexes and about their especial usefulness in regional sales quota work, back figures, and data about regional boundaries are available for users of the indexes.

1. New England

FEB., 80.2 JAN., 85.6 FEB. 1939, 84.4

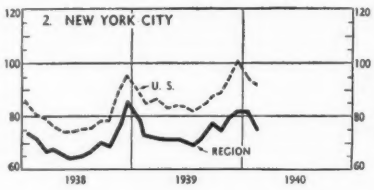
FEBRUARY—Percentage department store sales changes from previous February: Boston–Providence —5, New Haven +5. MARCH—Percentage retail trade increases over previous March: Bangor–New Bedford–Worcester 5, Portland–Manchester 0, Boston 18, Springfield 15, Providence 7, New Haven 12. Wholesale trade increases: Portland 0, Boston 10, Springfield 5. Plowing a few weeks behind schedule because of frost. Payrolls and production steady to above last year. Manufacturing of airplane parts at capacity levels. Many textile mills closed temporarily. Machine tool production somewhat below last month. APRIL—Retail sales somewhat below April, 1939. Machine and airplane parts manufacturing continue active.



2. New York City

FEB., 74.8 JAN., 81.1 FEB. 1939, 72.7

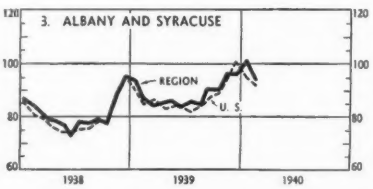
FEBRUARY—Percentage department store sales changes from previous February: New York and Brooklyn +2, Bridgeport +10, Westchester–Stamford —1. MARCH—Percentage retail trade changes from previous March: Bridgeport +5, New York City department store sales 0, hotel sales +2, parcel deliveries —6. New York City employment 2% above February, payrolls up 7%; employment 8% above last year, payrolls up 8%. New York City showed best industrial gains for March in the State, all main industries contributing. Collections fair. APRIL—Retail trade considerably below the pre-Easter level of the similar period last year, expected to average higher by end of month. Apparel manufacturing above March level.



3. Albany and Syracuse

FEB., 93.8 JAN., 100.1 FEB. 1939, 86.6

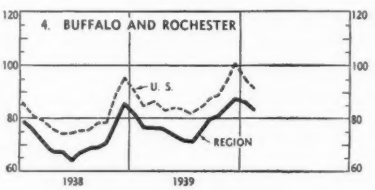
FEBRUARY—Percentage department store sales increases over previous February: Syracuse 10, Northern State 33, Central State 10. MARCH—Percentage retail trade increases over previous March: Albany–Binghamton 0, Utica 4, Syracuse 10. Wholesale trade changes: Albany +5, Syracuse —4. Farm prices steady, somewhat below normal for March. Payrolls and production generally steady to above last year. Binghamton shoe factories continue slow. Other industries steady with February. Collections fair in most sections, poor in Binghamton. APRIL—Retail trade slow because of poor weather and flood threats. Shoe industry still quiet in Binghamton. Collections exceptionally poor.



4. Buffalo and Rochester

FEB., 82.8 JAN., 86.1 FEB. 1939, 76.1

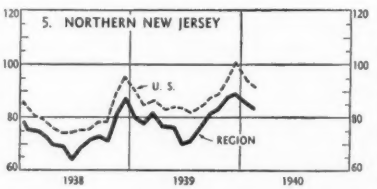
FEBRUARY—Percentage department store sales increases over previous February: Buffalo 6, Rochester 7, Niagara Falls 13. MARCH—Percentage retail trade changes from previous March: Buffalo +10, Elmira —6, Rochester +8. Buffalo wholesale trade 5% above last year's corresponding level. Farm income steady with same month a year ago. Rural trade affected by very severe storms, but city trade held up fairly well. Spring goods moved slowly in wholesale markets, but somewhat better than in March, 1939. Payrolls and production steady with a year ago in Rochester, better in Buffalo, poorer in Elmira. Collections fair to poor. APRIL—Weather conditions improved. Demand for house-furnishings strong.



5. Northern New Jersey

FEB., 82.9 JAN., 85.1 FEB. 1939, 77.4

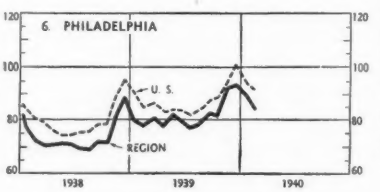
FEBRUARY—Northern New Jersey department store sales about even with previous February. MARCH—Newark retail trade 9% below previous March level; wholesale trade off 3%. Production, sales, employment, and payrolls in industrial establishments show gains in comparison with previous month, but average somewhat below the level of a year ago. Bank clearings 1% below last March in Newark, off 7% in Northern New Jersey as a whole. Collections steady in comparison both with the previous month and with a year ago. APRIL—Retailers report moderate decrease in sales compared both with March and with a year ago. Wholesale volume also off somewhat. Paint and varnish firms report recent increases in unfilled orders. Collections steady.



6. Philadelphia

FEB., 83.4 JAN., 90.0 FEB. 1939, 77.0

FEBRUARY—Percentage department store sales changes from previous February: Trenton +13, Philadelphia +2, Scranton —7, Wilmington +20. MARCH—Percentage retail sales changes from previous March: Trenton +6, Allentown +15, Philadelphia–York +10, Reading +14, Scranton–Harrisburg —5, Wilkes-Barre +2, Williamsport +5, Lancaster +8, Wilmington —7. Philadelphia wholesale trade up 15% from a year ago. Leaf tobacco selling for about 2 cents per pound less than last March. Payrolls and production steady to above last year. Month-to-month declines chiefly in building materials, wire and steel products, and transportation equipment. APRIL—Trade benefited by Spring-like weather; totals somewhat below 1939.



7. Pittsburgh

FEB., 91.1 JAN., 92.0 FEB. 1939, 82.9

FEBRUARY—Percentage department store sales changes from previous February: Pittsburgh +8, Wheeling —1, West Virginia State +14. MARCH—Percentage retail trade changes from previous March: Erie +10, Pittsburgh +11, Youngstown 0, Huntington —5, Charleston +2. Wholesale trade changes: Erie +10, Pittsburgh +13, Charleston +3. Payrolls and production generally steady in month, above last year's level. Pittsburgh steel rate about 59% of capacity, Youngstown about 40%. Electrical equipment orders about 30% ahead of last year. Coal production somewhat lower. Chemical and glass industries steady with February. APRIL—Heavy snow affected retail trade adversely. Industry steady.

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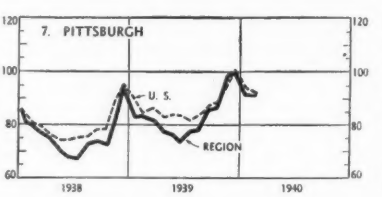
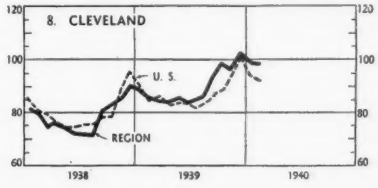
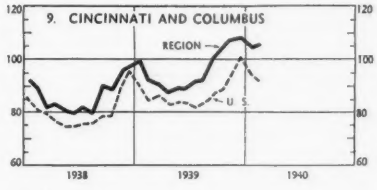


8. Cleveland

FEB., 97.3 JAN., 98.5 FEB. 1939, 86.1

FEBRUARY—Percentage department store sales increases over previous February: Cleveland–Akron 10, Toledo 11. MARCH—Percentage retail trade increases over previous March: Cleveland 5, Akron 9, Canton 7, Toledo 3, Lima 0. Wholesale trade increases: Cleveland 5, Akron 2, Toledo 3. Payrolls and production steady to above last March. Steel production holding firm, somewhat above rate of new orders. Airplane and automotive businesses maintaining some plants at high capacity levels. Machine tool industry planning considerable expansion. Collections fair to good. APRIL—Trade activity considerably improved over March. Employment conditions continue favorable. Residential building active.





9. Cincinnati and Columbus

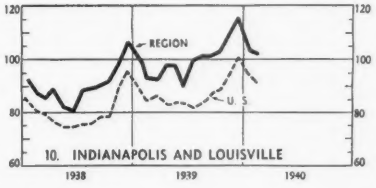
FEB., 105.2 JAN., 103.8 FEB. 1939, 93.3

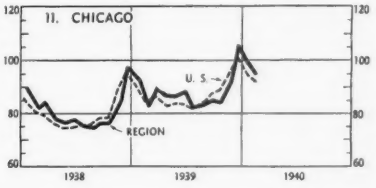
FEBRUARY—Percentage department store sales increases over previous February: Cincinnati 15, Columbus 10. MARCH—Percentage retail trade changes from previous March: Cincinnati +15, Dayton +1, Springfield–Zanesville —10, Columbus +8, Lexington +4. Poultry and dairy products plentiful; prices rather low. Spring plowing begun, although retarded somewhat by heavy rains. Payrolls and production steady to below last March. Machine tool plants operating at capacity. Automobile sales 50% above first quarter of 1939. Building industry much more active than in March, 1939. Collections fair. APRIL—Both retail and wholesale trade reported rather dull, due to early Easter and bad weather.

10. Indianapolis and Louisville

FEB., 101.9 JAN., 104.0 FEB. 1939, 93.3

FEBRUARY—Percentage department store sales increases over previous February: Louisville 12, Indianapolis 13, Fort Wayne 17. MARCH—Percentage retail trade increases over previous March: Louisville 10, Evansville 5, Indianapolis–Fort Wayne 8, Terre Haute 3. Wholesale trade changes: Louisville 0, Indianapolis +12. Pasturage somewhat short because of lack of moisture; livestock conditioning slow to start. Payrolls and production steady to below last year. Manufacturers of electrical equipment and agricultural machinery report slightly increased activity. Manufacturing of metal beds, fencing, and allied lines above 1939. APRIL—Retail trade improved with better weather conditions. Industry steady.





11. Chicago

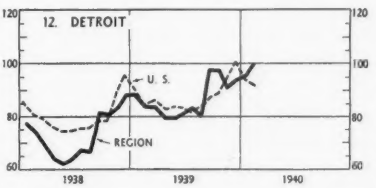
FEB., 94.0 JAN., 99.6* FEB. 1939, 82.1

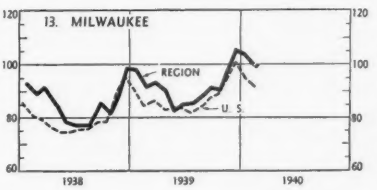
FEBRUARY—Percentage department store sales increases over previous February: Chicago 12, Peoria 15. MARCH—Percentage retail trade increases over previous March: Chicago 3, Rockford 10, Peoria 4, South Bend 15. Chicago wholesale trade off 4% from previous March level. Cattle and hog prices lowest in six years. Recent snow and rain left soil in good condition. Payrolls and production generally above last year; below a year ago in Chicago. Traffic on surface lines for first quarter of year about 4% above previous year's comparative. Collections fair to good. APRIL—Retail trade improved under impetus of fine Spring weather. Wholesale activity also showing a nice gain. Industry about even with March. *Revised.

12. Detroit

FEB., 99.6 JAN., 96.3 FEB. 1939, 83.8

FEBRUARY—Detroit department store sales 15% above level of previous February. MARCH—Percentage retail trade increases over previous March: Detroit 4, Grand Rapids 12, Saginaw 10. Wholesale trade increases: Detroit 5, Grand Rapids 10. Hothouse garden truck finding ready market; quality excellent. Payrolls and production steady to above February, generally above March, 1939. Automobile production more than 20% ahead of last March. Grand Rapids refrigerator and auto parts manufacturing active. Furniture sales increased over February; good Spring volume anticipated. Collections fair to good. APRIL—Retail sales about 20% above level in April, 1939. Wholesale activity 10% above last year.





13. Milwaukee

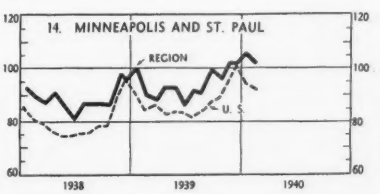
FEB., 97.9 JAN., 103.8 FEB. 1939, 91.3

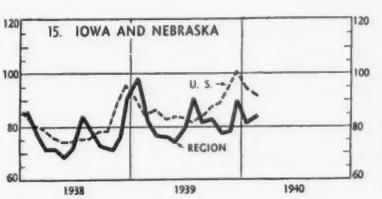
FEBRUARY—Milwaukee department store sales 9% above level of previous February. MARCH—Percentage retail trade increases over previous March: Milwaukee 7, Green Bay 7. Milwaukee wholesale trade up 5% from corresponding month last year. Payrolls and production steady to above last year, steady with February. Export business benefiting metal trades in all branches; machine tools, milling machines, lathes, drill presses, and screw products plants all operating at capacity. Collections fair, about the same as in February, 1940, and in March, 1939. APRIL—Department store sales about 12% below corresponding period last year. Bank clearings well above totals for same period a year ago.

14. Minneapolis and St. Paul

FEB., 101.9 JAN., 106.0 FEB. 1939, 90.3

FEBRUARY—Minneapolis–St. Paul–Duluth–Superior department store sales 12% above previous February level. MARCH—Percentage retail trade increases over previous March: Duluth–Fargo–Billings 0, Minneapolis 7, St. Paul–La Crosse 3, Sioux Falls–Great Falls 5, Butte 25. Wholesale trade increases: Duluth 0, Minneapolis 6, Great Falls 5. Per cent of farms occupied higher than for some time. Soil in excellent condition in most sections. Prospects for Winter wheat crop good. Payrolls and production steady to above last year. Meat packing active. Flour and linseed oil output ahead of last year. APRIL—Sales of Spring apparel at standstill because of Wintry weather.



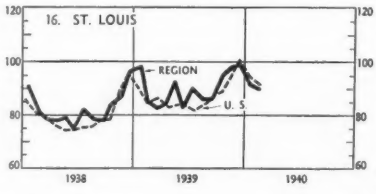


15. Iowa and Nebraska

FEB., 84.5 JAN., 82.6 FEB. 1939, 81.4

FEBRUARY—Omaha department store sales 10% above level of corresponding month of 1939. MARCH—Percentage retail trade changes from previous March: Burlington-Omaha +3, Cedar Rapids–Davenport–Lincoln 0, Dubuque —15, Waterloo +7, Sioux City +4, Des Moines —3. Wholesale trade changes: Sioux City +5, Des Moines 0, Omaha +2. Winter wheat aided by heavy snows in January and February; still more moisture needed. Increasing surplus of corn and hogs. Farm income about on a par with the year ago level. Payrolls and production steady to above last year. Light manufacturing as well as heavy machinery lines active. APRIL—Spring buying slow getting under way, awaiting better weather.

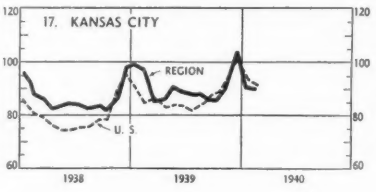
16. St. Louis



FEB., 89.6 JAN., 93.4 FEB. 1939, 84.0

FEBRUARY—Percentage department store sales changes from previous February: St. Louis +13, Springfield (Mo.) —6, Quincy +19. MARCH—Percentage retail trade increases over previous March: St. Louis 12, Springfield (Mo.) 5, Springfield (Ill.) 0, Quincy 10. St. Louis wholesale trade up 3% from the year ago comparative. Payrolls and production generally about even with a year ago. Operations in paint, varnish, and electrical equipment lines continue at a good rate. Building activity in St. Louis noticeably under the same month last year. Apparel lines in a between-season lull. Collections fair to poor. APRIL—Retail trade 3 to 6% above 1939. Industrial activity still ahead of last year.

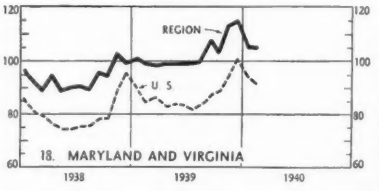
17. Kansas City



FEB., 89.8 JAN., 91.2 FEB. 1939, 87.4

FEBRUARY—Percentage department store sales increases over previous February: Kansas City 11, Oklahoma City 7, Tulsa 10. MARCH—Percentage retail trade changes from previous March: Kansas City +7, St. Joseph —4, Topeka 0, Wichita +10, Oklahoma City +3, Tulsa +5. Wholesale trade decreases: Kansas City 8, Oklahoma City 3. Wheat acreage smallest since 1935. Severe drought of Fall of 1939 relieved somewhat by snow and rain, but more moisture needed. Payrolls and production steady to below last year. Milling 10% below February, 5% below previous March. Packing improved over both previous month and 1939. Airplane plants active. APRIL—Retail trade below last April; wholesale orders steady.

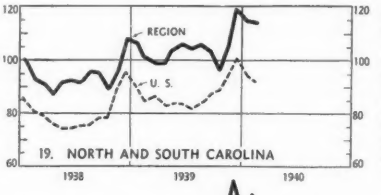
18. Maryland and Virginia



FEB., 104.4 JAN., 104.9 FEB. 1939, 99.2

FEBRUARY—Percentage department store sales increases over previous February: Baltimore 10, Washington–Virginia State 11, Richmond 13. MARCH—Percentage retail trade increases over previous March: Baltimore 5, Washington 6, Norfolk–Bristol 10, Richmond 4, Lynchburg 18, Roanoke 13. Wholesale trade increases: Baltimore 5, Norfolk 2, Richmond 3. Farmers increasing acreage of oats, barley, hay, soy beans, and peanuts; reducing that of potatoes and tobacco. Tobacco and cigarette production active. Furniture and paper manufacturing about even with March, 1939. Steel and airplane plants receiving large orders. Rayon production below February. APRIL—Retail trade benefited by more open weather. Building industry unusually active.

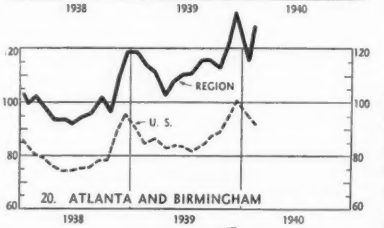
19. North and South Carolina



FEB., 113.3 JAN., 114.7 FEB. 1939, 101.4

FEBRUARY—Percentage department store sales increases over previous February: North Carolina 13, South Carolina 15. MARCH—Percentage retail trade changes from previous March: Asheville —5, Winston-Salem —10, Charlotte–Wilmington +2, Raleigh +5, Charleston +6, Columbia +15, Greenville +45. Wholesale trade changes: Wilmington +3, Charleston 0, Winston-Salem 0. Trade adversely affected by cold and rainy weather, especially prior to Easter. Tourist season best in years; crowds in Charleston to see gardens. Prices of farm products up due to damage to Florida crops by frost. Payrolls and production steady with a year ago. Collections fair. APRIL—Fertilizer shipments heavier than last year.

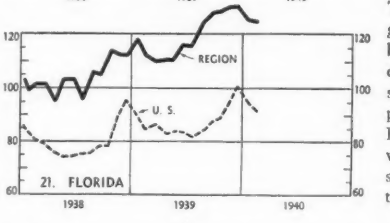
20. Atlanta and Birmingham



FEB., 128.1 JAN., 116.3 FEB. 1939, 113.6

FEBRUARY—Percentage department store sales increases over previous February: Atlanta 19, Birmingham 8, Montgomery 14, Nashville 2. MARCH—Percentage retail trade changes from previous March: Atlanta +12, Augusta +10, Columbus +15, Macon +8, Savannah +20, Birmingham–Chattanooga +5, Montgomery +24, Mobile 0, Knoxville–Nashville —5. Wholesale trade changes: Atlanta–Nashville +5, Birmingham —10. Early asparagus crop bringing good price. Payrolls and production generally steady with same month last year. Textile and steel plants active. Savannah cigar factory recently closed. Building materials in good demand. Collections fair. APRIL—Summer retail promotions begun. Large number of tourists in Mobile to see azaleas.

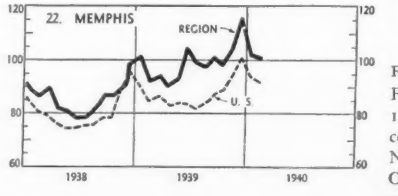
21. Florida



FEB., 124.1 JAN., 125.2 FEB. 1939, 112.0

FEBRUARY—Florida department store sales 13% above level of corresponding month in 1939. MARCH—Percentage retail trade increases over previous March: Jacksonville 14, Miami 10, Tampa 15. Wholesale trade increases: Jacksonville 4, Tampa 5. Citrus shipments falling off; prices fairly good. Bean crop on lower East Coast damaged by heavy rains. Vegetable prices good, but production light. Payrolls and production generally steady with a year ago and with February. Cigar producton good in both Jacksonville and Tampa. Lumber industry hampered by continuance of cold weather in North. Collections fair. APRIL—Retail sales lagged as tourist season ended and temperatures remained low.

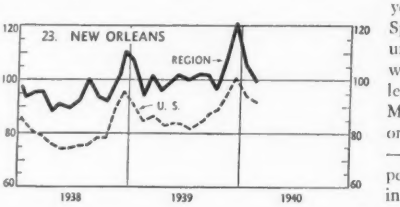
22. Memphis



FEB., 100.6 JAN., 102.3 FEB. 1939, 92.1

FEBRUARY—Percentage department store sales increases over previous February: Memphis 7, Fort Smith 12, Little Rock 14. MARCH—Percentage retail trade increases over previous March: Memphis 5, Fort Smith 8, Little Rock 15. Memphis wholesale trade 5 per cent above previous March level. Spring planting started. Fruit crops hurt by cold weather; spinach crop and prices good. Vacation season and race meet at Oaklawn spurred retail trade in resort center. Payrolls and production vary in comparison with last year. Slight gains in all branches of industry in Little Rock. Fort Smith furniture industry running behind last year's level. APRIL—Higher temperatures stimulated retail trade in some lines; buying somewhat slower than in March.

23. New Orleans



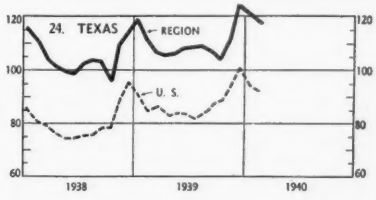
FEB., 99.8 JAN., 106.5 FEB. 1939, 94.2

FEBRUARY—New Orleans department store sales 12% above previous February level. MARCH—Percentage retail trade increases over previous March: New Orleans 8, Jackson 20, Meridian 18. New Orleans wholesale trade even with same month last year. Prolonged cold weather lessened sales of Spring goods. Truck crops off about 20% due to unseasonable cold. Payrolls and production steady with a year ago, steady to up since February. Petroleum production and refining most active industries. Manufacturing of Summer clothing slowed as orders were filled. Collections fair to good. APRIL—Bank clearings about 19% above corresponding period last year. Retail trade level about same as in March.

24. Texas

FEB., 116.5 JAN., 121.0 FEB. 1939, 111.5

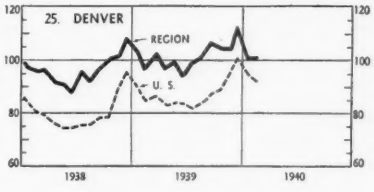
FEBRUARY—Percentage department store sales increases over previous February: Dallas–Fort Worth 8, Houston 1, San Antonio 12. MARCH—Percentage retail trade increases over previous March: Dallas–Lubbock–Wichita Falls–Waco 10, Fort Worth 20, El Paso 5, Houston 2, Galveston 7, Beaumont 8, Austin 1, San Antonio 3, Shreveport 15. Wholesale trade increases: Dallas–Fort Worth 5, Houston 1, San Antonio 7, Shreveport 10. More moisture needed for crops. Corn planting in progress; land well prepared for cotton. Payrolls and production steady to above last year. Manufacturing of heavy goods and construction materials improved over February. APRIL—Bank clearings 5 to 10% above corresponding period in 1939.



25. Denver

FEB., 100.2 JAN., 100.3 FEB. 1939, 97.1

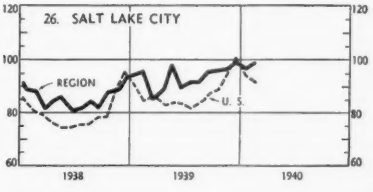
FEBRUARY—Denver department store sales 11% above previous February level. MARCH—Percentage retail trade changes from previous March: Denver +4, Albuquerque 0. Denver wholesale trade 5% above corresponding month last year. Farm prices steady. Soil in good condition for Spring planting. Used-car market overstocked; new car sales good. Payrolls and production steady to above last year and steady to above February. Farm equipment sales increased because of heavy planting. Residential building active; large number of FHA loans. Mining making some progress; old claims being reworked in some instances. Collections fair to good. APRIL—Number of cattle on feed 15 to 20% smaller than a year ago.



26. Salt Lake City

FEB., 98.6 JAN., 96.8 FEB. 1939, 96.4

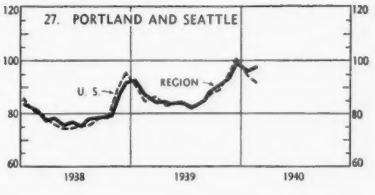
FEBRUARY—Salt Lake City department store sales 10% below level of previous February. MARCH—Salt Lake City retail trade up 7% from the year ago level; wholesale trade shows gain of 11% over previous March. Wholesale buying of dry goods up 20 to 25% over 1939 month, electrical appliances 12 to 13% more active, groceries 10 to 12% ahead of a year ago. Range and water conditions good. Mild Winter and mild, warm March enabled early plowing and some planting. Farm prices better than a year ago. Payrolls and production steady with February, increased over March last year. Collections about same as in previous month, better than a year ago. APRIL—Department store sales about 25% below last April.



27. Portland and Seattle

FEB., 97.3 JAN., 96.3 FEB. 1939, 87.5

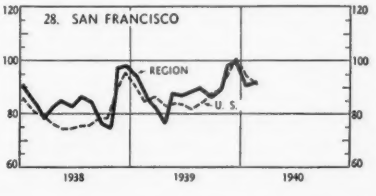
FEBRUARY—Percentage department store sales increases over previous February: Seattle–Spokane 12, Tacoma 8, Portland 15. MARCH—Percentage retail trade increases over previous March: Seattle–Tacoma 10, Spokane 5, Portland 15. Wholesale trade increases: Seattle 10, Portland 6. Rhubarb being shipped from Puyallup Valley; prices somewhat better than last year. Wheat prospects continue good. Apple prices improved. Payrolls and production generally above a year ago; steady to up since February. Lumber production hampered by lack of shipping space for intercoastal trade; pulp and paper mills, however, running at capacity. APRIL—Department store sales about even with a year ago. Industry steady.



28. San Francisco

FEB., 91.7 JAN., 90.0 FEB. 1939, 88.5

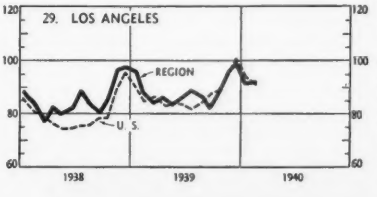
FEBRUARY—Percentage department store sales decreases from previous February: San Francisco 5, Oakland 1. MARCH—Percentage retail trade changes from previous March: San Francisco +8, Oakland +7, Sacramento +6, Fresno —5. San Francisco wholesale trade up 5% from the similar month last year. Widespread storms and floods retarded general movement of merchandise, adversely affected early crops. Payrolls and production steady to above last year. Metals, machinery, paper, and electrical equipment lines in best condition. Opening of canneries delayed because of flood conditions in the spinach area. Collections fair. APRIL—Department store sales about 24% below last April, due to after-Easter lull.



29. Los Angeles

FEB., 91.7 JAN., 91.8 FEB. 1939, 87.1

FEBRUARY—Percentage department store sales increases over previous February: Los Angeles 4, Phoenix 13. MARCH—Percentage retail trade changes from previous March: Los Angeles 0, San Diego +5; Phoenix trade up a little from the year ago level. Los Angeles wholesale trade off slightly from the same month in 1939. Recent rains benefited agriculture. Orange and lemon prices well above a year ago. Lettuce yield and prices good. Payrolls and production steady in month, above March, 1939. Aircraft industry booming. Motion picture studio operations improved since February. Building activity below March, 1939. APRIL—Retail trade spotty, due in part to unsettled weather. Aircraft still active.



PLOWING—CHARLES PHELPS CUSHING PHOTO

SIGNIFICANT BUSINESS INDICATORS

COMPILED BY THE STATISTICAL STAFF OF "DUN'S REVIEW"

More detailed figures appear in "DUN'S STATISTICAL REVIEW"

Building Permit Values—215 Cities

Geographical Groups:	March 1940	March 1939	Per Cent Change	February 1940	Per Cent Change
New England	$7,071,377	$14,751,105	— 52.1	$3,255,821	+117.2
Middle Atlantic	31,592,213	31,085,187	+ 1.6	31,825,171	— 0.7
South Atlantic	12,759,014	11,982,086	+ 6.5	8,907,778	+ 43.2
East Central	19,277,130	21,758,026	— 11.4	17,480,063	+ 10.3
South Central	12,198,710	10,614,141	+ 14.9	8,338,810	+ 46.3
West Central	4,418,253	5,538,142	— 20.2	4,784,277	— 7.7
Mountain	2,539,222	3,187,873	— 20.3	1,286,937	+ 97.3
Pacific	20,742,873	19,773,839	+ 4.9	14,644,148	+ 41.6
Total U. S.	$110,598,792	$118,690,399	— 6.8	$90,523,005	+ 22.2
New York City	$21,646,265	$21,312,975	+ 1.6	$21,109,022	+ 2.5
Outside N. Y. C.	$88,952,527	$97,377,424	— 8.7	$69,413,983	+ 28.1

Bank Clearings—22 U. S. Cities

(Millions of dollars)

	Monthly			Daily Average		
	1940	1939	1938	1940	1939	1938
January	23,922	23,187	21,798	920.1	927.5	871.9
February	20,446	19,711	17,584	889.0	896.0	799.2
March	23,615	24,995	22,822	908.3	925.7	845.3
April	.....	21,798	21,667	....	871.9	833.4
May	.....	22,188	20,169	....	853.4	806.8
June	.....	23,022	23,959	....	885.5	921.5
July	.....	21,386	21,624	....	855.4	865.0
August	.....	22,591	19,716	....	836.7	730.2
September	.....	23,820	21,733	....	952.8	869.3
October	.....	22,244	24,011	....	889.8	960.4
November	.....	22,598	21,637	....	982.5	940.7
December	.....	26,596	27,697	....	1,063.8	1,065.3
Total	.....	274,136	264,417	....	911.7	875.8

Bank Clearings for Individual Cities

(Thousands of dollars)

	March 1940	March 1939	Per Cent Change	February 1940
Boston	1,126,862	980,610	+ 14.9	871,294
Philadelphia	1,759,000	1,713,000	+ 2.7	1,605,000
Buffalo	143,014	131,008	+ 9.2	140,607
Pittsburgh	570,198	480,261	+ 18.7	530,186
Cleveland	434,695	397,312	+ 9.4	404,524
Cincinnati	271,082	251,049	+ 8.0	236,573
Baltimore	343,896	295,939	+ 16.2	300,863
Richmond	163,551	159,989	+ 2.2	160,990
Atlanta	273,800	252,900	+ 8.3	245,900
New Orleans	191,436	181,297	+ 5.6	165,838
Chicago	1,364,885	1,285,827	+ 6.1	1,233,300
Detroit	479,484	411,008	+ 16.7	441,265
St. Louis	396,411	387,662	+ 2.3	347,822
Louisville	184,197	154,565	+ 19.2	150,383
Minneapolis	294,171	264,544	+ 11.2	258,801
Kansas City	393,958	372,532	+ 5.8	348,575
Omaha	132,157	133,263	— 0.8	119,955
Dallas	253,559	229,452	+ 10.5	230,578
San Francisco	627,011	599,780	+ 4.5	583,300
Portland, Ore.	158,927	152,317	+ 4.3	117,742
Seattle	163,328	149,529	+ 9.2	147,290
Total 21 Cities	9,725,622	8,983,844	+ 8.3	8,640,786
New York	13,889,325	16,010,937	— 13.3	11,805,642
Total 22 Cities	23,614,947	24,994,781	— 5.5	20,446,428

Dun & Bradstreet
Weekly Food Price Index

The index represents the sum total of the wholesale price per pound of 31 commodities in general use.

Weeks:	1940	1939	1938	1937
Apr. 30	$2.34	$2.27	$2.36	$2.82
Apr. 23	2.33	2.27	2.36	2.86
Apr. 16	2.30	2.28	2.37	2.89
Apr. 9	2.30	2.28	2.37	2.89
Apr. 2	2.28	2.27	2.41	2.94
Mar. 26	2.29	2.29	2.44	2.99
Mar. 19	2.29	2.31	2.46	3.01
Mar. 12	2.31	2.29	2.48	3.01
Mar. 5	2.32	2.34	2.49	2.99

	High		Low	
1940	$2.36	Jan. 30	$2.28	Apr. 2
1939	$2.46	Sept. 19	$2.13	Aug. 15
1938	$2.53	Jan. 4	$2.34	May 10

Dun & Bradstreet
Daily Wholesale Price Index
30 Basic Commodities

(1930-1932 = 100)

	1940			1939
	Apr.	Mar.	Feb.	Jan.
1	117.92	119.00	119.63	*
2	117.46	118.92	119.36	123.34
3	117.77	†	118.93	123.13
4	117.77	119.22	†	122.87
5	117.89	119.69	118.96	122.61
6	117.52	119.79	119.02	122.46
7	†	119.87	118.76	†
8	117.85	119.53	118.74	122.89
9	118.81	119.60	119.16	122.67
10	118.93	†	119.08	122.44
11	119.33	119.31	†	122.19
12	119.47	119.21	*	121.57
13	119.49	118.57	118.36	121.57
14	†	118.88	118.31	†
15	119.75	118.50	118.52	122.34
16	120.43	117.95	119.24	121.66
17	120.28	†	119.17	121.73
18	121.40	118.01	†	122.13
19	121.39	118.36	119.20	122.09
20	121.41	119.13	119.39	122.11
21	†	119.08	119.94	†
22	121.92	*	*	121.35
23	121.79	*	119.95	120.38
24	121.50	†	119.56	120.73
25	121.24	119.03	†	120.82
26	120.89	118.25	119.31	120.59
27	120.91	118.17	119.10	120.61
28	†	118.39	119.44	†
29	121.13	117.99	119.54	119.69
30	120.74	118.00		119.66
31		†		119.72

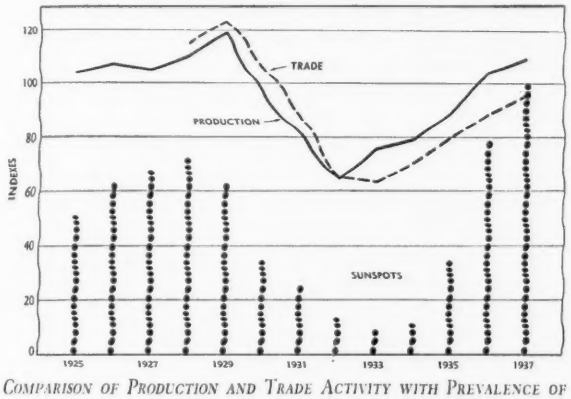
† Sunday. * Markets closed.

	High		Low	
1940	123.34	Jan. 2	117.46	Apr. 2
1939	124.19	Dec. 18	101.40	July 24
1938	117.06	Jan. 10	102.43	June 2

THROUGH THE STATISTICIAN'S EYES

ODD AND INTERESTING ITEMS FROM THE MONTH'S RECORD

Sunspots and Business



COMPARISON OF PRODUCTION AND TRADE ACTIVITY WITH PREVALENCE OF SUNSPOTS—*1925-1937—The movements of the Federal Reserve Board's adjusted index of industrial production and of the United States Trade Barometer during the period indicated correspond remarkably with Harlan T. Stetson's curve of the relative number of sunspots.*

PERHAPS it is mere coincidence, but almost everything except rabbits and short-wave radio seems to flourish in times of sunspot maxima. Even business activity in recent years has shown a remarkable tendency to vary in the same direction as the number of sunspots. Some startling theories about the relationship between cycles in business and cycles of cosmic origin have been presented for public scrutiny by Harlan T. Stetson of the Massachusetts Institute of Technology in his book, *Sunspots and Their Effects* —although he warns against conclusions without sufficient scientific proof.

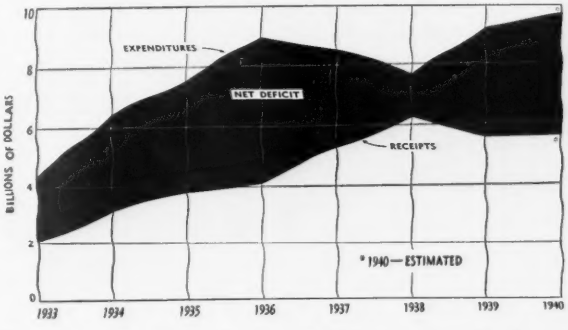
Sunspots, it is said, affect not only the weather, and hence crops, but also the physiological and psychological behavior of man; it therefore seems a reasonable assumption that economic conditions should be dependent in some degree on man's behavior as it results from the quantity and *quality of the sun's* light and heat. Statisticians who are too busy to consider events off the earth in connection *with business fluctuations, though they may be skeptical,* must be impressed by the evidence presented.

Showing charts to illustrate many of his points, Stetson tells of an amazing correspondence between sunspot activity and general business, sunspots and automobile production, *sunspots and building contracts.* Business failures were discovered to be most numerous when sunspots were at a minimum, *and the rate of increase of new corporations in* New York, New Jersey, Delaware, and Massachusetts also followed the sunspot cycle. Even gifts to colleges responded to the sunspot stimulus.

The theory behind all this? The amount of ultra-violet light which we receive from the sun is greatest at sunspot maxima, and thus biological changes are effected on the earth. Trees grow more rapidly, wine quality is improved —*why wouldn't* the disturbances carry over to man's ductless glands, thus affecting his initiative, his mental powers, and his general optimism (*known sometimes as* "business sentiment")? According to the sunspot theory, the next peak of prosperity should be due just about now, with another low point somewhere between 1944 and 1946, and another high around 1950.

The Federal Budget

THE NET DEFICIT of the United States Government was *$419,000,000 greater during the first eight months of the* fiscal year 1940 (which ends June 30, 1940) than during the similar period of the fiscal year 1939. The Treasury Department reports that, while receipts from miscellaneous internal revenue, Social Security taxes, customs, and "other" *sources showed an increase of $199,000,000* over the same



RECEIPTS AND EXPENDITURES OF THE U. S. GOVERNMENT—*Fiscal years 1933-1940—U. S. Treasury Department—Estimates for 1940 indicate that the net deficit for this year will be larger than that of any recent year except 1936, slightly above the 1935 figure; both receipts and expenditures have been trending upward during recent years.*

eight months of the 1939 fiscal period, revenue from the income tax declined $330,000,000 and taxes on carriers and their employees were off $19,000,000. The net decrease in *receipts was $150,000,000.*

At the same time, all classes of expenditures showed an increase except *public works and unemployment relief,* which were off $23,000,000 and $506,000,000, respectively. National defense and Veterans' Administration expenses were $189,000,000 larger, payments under the Social Security and Railroad Retirement Acts were up $21,000,000, the *Agricultural Adjustment Program took $311,000,000* more than the year before, interest on the public debt was $40,000,000 higher, *loans and stock subscriptions were*

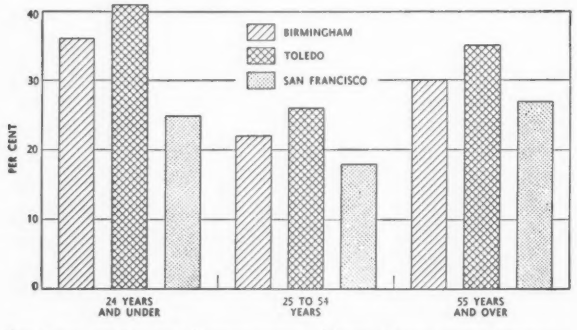
larger by $33,000,000, and "other" expenses increased $204,000,000. The net rise in expenditures for the eight months was $269,000,000.

Estimates for the full fiscal year 1940 follow rather closely the pattern observed for the first eight months. The net deficit is expected to be $391,000,000 larger than last year, and expenditures are expected to increase about $427,000,000. Receipts will presumably show a small increase also, about $36,000,000, in contrast to the decrease noted in the first eight months; miscellaneous internal revenue, income tax, and customs are expected to make up the difference. On the expenditure side of the ledger, National defense will increase the most, while unemployment relief will show the largest decline. Total expenditures will amount to approximately $10,000,000,000, receipts to about $6,000,000,000.

Unemployment

"Facts About Unemployment," a pamphlet published by the WPA Division of Research, gives the results of an investigation in three representative cities in March, 1939, of what many people regard as the United States' No. 1 economic problem. The labor supply—that is, persons with jobs, persons actively looking for jobs, and persons only temporarily neither working nor looking for work—consisted of 47 per cent of the total population in Birmingham, 45 per cent in Toledo, and 52 per cent in San Francisco. In all three cities, there were more than twice as many men as women in the labor market.

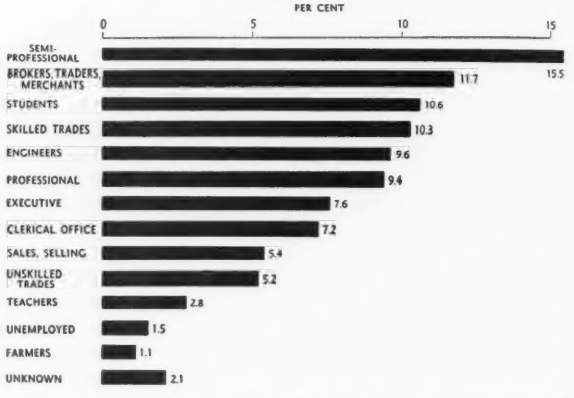
Of the total labor supply existing in March, 1939, 26 per cent were unemployed in Birmingham, 30 per cent were unemployed in Toledo, and 20 per cent were unemployed in San Francisco. The proportions of men and women out of work varied among the three cities; in San Francisco the proportions were equal; in Birmingham the rate of unemployment for women was 32 per cent, for men 22 per cent; in Toledo 31 per cent of the men workers were unemployed, as against 28 per cent of the women.



Per Cent of Workers Unemployed in Three Cities by Age Groups—*March, 1939—Works Projects Administration—Youth and age share the chief burdens of unemployment in all three cities; total unemployment is greatest in Toledo, least in San Francisco, but only in San Francisco are more older people unemployed than younger people.*

The average duration of unemployment since the last full-time job was about a year in all three cities, and the young and the old were much more likely to be unemployed than were workers in the middle years. Unemployed workers on the Works Program were the ones who had been out of work the longest—an average of 27 months in Birmingham, 18 months in Toledo, and 38 months in San Francisco. The Works Program group also had a higher median age level than other unemployed, since usually the family head was the one assigned to work-relief.

Model Railroading



Occupational Classification of Model Railroad Fans—*1939—"The Model Railroader"—Followers of this intriguing hobby earn their livelihoods in diverse manners; engineers and skilled tradesmen account for about 20 per cent of the total number of fans.*

A fast-growing hobby for men of all ages, incomes, occupations, and education is model railroading. A study made by the magazine *Model Railroading,* covering about 2,000 model railroad fans and claiming to be the first statistical survey of such a field, revealed many interesting characteristics of the hobby's devotees. The average age of those interested in the pee-wee trains was found to be 30 to 35 years, while almost 60 per cent were between 25 and 40 years of age. Most of the men had been model railroaders for one to four years, but a few of them had been fans for less than a year, and an equal number for more than 13 years.

The yearly income of about 45 per cent of the model railroaders was between $1,000 and $3,000; 5 per cent had incomes of less than $1,000, and 9 per cent of more than $5,000. The largest proportion of the model railroaders spend less than $40 a year on their hobby, although 6 per cent of those surveyed said they spent more than six times that amount. Semi-professional people, brokers, traders, merchants, and students are most apt to be model railroad fans, but even farmers and teachers sometimes succumb to the craze.

HERE *and* THERE *in* BUSINESS

WHAT'S NEW AS OBSERVED BY THE AGENCY'S REPORTERS

A SPECIAL class to outline work simplification will be conducted at Lake Placid for top men in business this Summer by Allan H. Mogensen, management consultant and winner in 1937 of the Society for the Advancement of Management's Gilbreth Medal. The course will last for two weeks, from August 12 to August 24.

The study will supplement a six-week class in the details of supervisory training for work simplification. The first of these longer classes was held in 1937, for engineers and others who actually handle the simplification program in a company.

Purpose of the shorter course for company brass hats is to review the basic principles of work simplification, what it is, what it has done, and how to co-operate with the man from the same company who has been sent to the detailed course and will later handle this work at his home plant.

Home Gadget—A seven-in-one contraption made by Barcalo Manufacturing Company, Buffalo, New York, illustrates again the American genius for cure-alls. It's a combination punch opener, screwdriver, screw cap wrench, hammer, bottle opener, cutting edge, and slot-to-make-a-can-pouring-lip.

Audits—Change is still the order of the day for corporate annual reports; latest examples indicate business not only embroiders a balance sheet with educational homilies on finance but now also has revised the very shirt-tail end of a report, wherein the auditor says, "We have examined the records . . . to the extent deemed appropriate."

Fansteel Metallurgical Corporation, North Chicago, Illinois, for example, printed an auditor's certificate almost 500 words long, citing the full tests, inspections, and conclusions of William W. Thompson & Company. And for the National Dairy Products Corporation, New York, the auditors, Price, Waterhouse & Company, set down some 750 words. The same firm's certificate for the United Cigar-Whelan Stores Corporation was equally as detailed.

The trend toward making finance as easy to take as chocolate cream pie for a schoolboy apparently continues. The report of General Foods Corporation entices stockholders with a four-color cover. This shows a research chemist holding what looks like one of baby's Tinker Toys. (It's a molecular model of anacardic acid.) Photographs illustrating the 34-page report have gilt edges; and pale gold lines run across the balance sheet statement. Included in the booklet is a "History of Capitalization."

The Johns-Manville Corporation, in its report to employees, tried the quiz technique, directly answering questions such as "Why do we need new money from stockholders?"

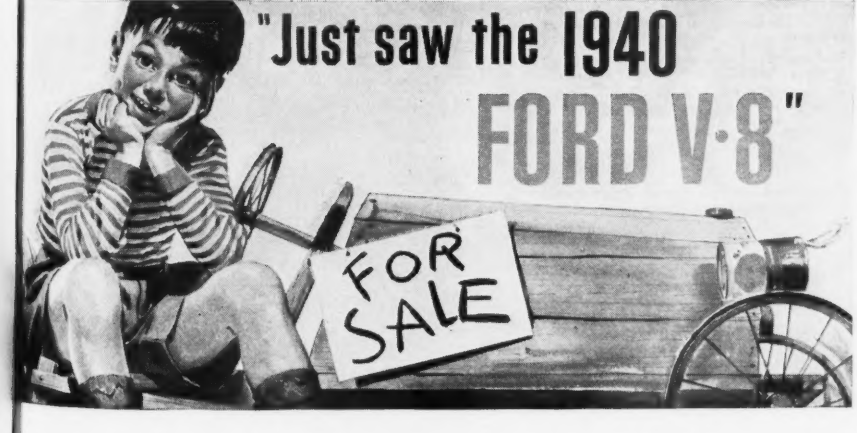
LONGITUDINAL *seam welder, American Rolling Mill Company, Middletown, Ohio, used on porcelain enameled hot water tanks of newly established Porcelain Steels, Inc., Cleveland, Ohio.*

Bagged—By this month about 80 per cent of the territory served by five North Central and Southeastern General Mills plants should be getting 10 and 24½-pound flour bags sealed with a flat top. Machine to do it was perfected by designer Helmer Anderson.

Five-pound bags have been glue-sealed with flat tops for some time. Till the advent of Mr. Anderson's new sealer, however, the bigger containers sported a top-knot, similar to the hair-do which adorns those admirable maiden aunts who study family blood lines and never show their age.

Writing—The introduction to a recent employee letter-writing manual issued by the Commonwealth Edison Company, Chicago, Illinois, attempts

MAN—Advertising remembers the homely and human, e typified by comics heroine Ella Cinders. Ford poster McCann-Erickson and Continental Lithograph Corp.



to make utility workers, accustomed to standards of engineering performance, adept in the intangibles of customer correspondence. Says its front cover:

"To Edisonians:

"A letter must be built.

"It is like any material structure, whose worth depends upon a planned composition of its contents.

"Composition requires less art than science—knowledge of how to present facts logically and effectively."

The booklet sets up correspondence problems as one might present engineering questions: the inquiry, the facts, the written reply, and notes analyzing the reply.

Since 1935 no novice at turning engineers into writers and making them like it, Commonwealth Edison, like a few other companies, conducts an annual employee-author contest, encouraging its people in research and stimulating them to write about their jobs. This year the contest committee made sixty suggestions for articles. Subjects ranged from load distribution to equipment used in accounting.

DO YOU KNOW THAT

***Leasing* your salesmen's cars**

COSTS LESS THAN OWNERSHIP?

"WE GIVE YOU EVERYTHING BUT GAS AND OIL"

Nothing peps up a salesman more than driving a good-looking car in *good* condition. The R. A. Company's leasing plan makes this possible—provides each man with a new car every year—assumes all items of service, maintenance and repairs. In most cases your total cost, including gas and oil, will not exceed **3½c.** per mile.

Your salesman is relieved of all worries and responsibilities of a personally owned car. Your company is relieved of the necessity of maintaining costly service garages and records. There is no restriction on mileage in use of car at any time. Use of decalcomania, trade-mark, permitted.

The annual leasing charge per car is considerably less than the cost of a new car. In many cases savings under our plan have been one-third to one-half former costs.

Why not start *now* to effect these savings! We are serving more than 100 different national companies. Phone or write for a representative to explain all the details of the R. A. Plan.

UNDER THE R. A. PLAN YOU GET:

A brand new Dodge, Plymouth or Chevrolet of latest model every 12 months.

License plates in whatever states operated.

Fire, theft and $25.00 deductible collision insurance.

Replacement of cars without additional cost if destroyed by fire, collision or otherwise.

All items of service, maintenance and repairs of every kind and description.

Tire repairs and replacements.

Chains and anti-freeze.

Grease.

Purchase for cash present equipment owned by your company or salesmen.

OPERATING NOW IN 48 STATES

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Philadelphia, Pa. (Rittenhouse 2390)

Livestock—A little over two years ago, railroad stock pens at Hillsboro, Ohio, as in scores of other communities, saw a lamb shipment only when some triumphant trucker drove past. But in 1938, thanks to promotional work by the Baltimore & Ohio Railroad's Agricultural Development Department, Hillsboro shipments returned to rails.

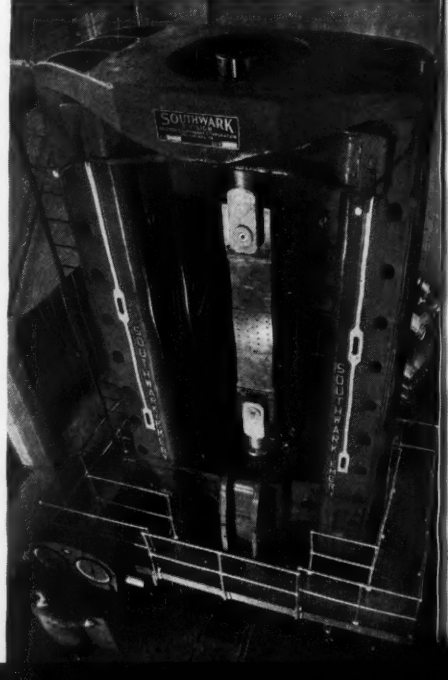
The development department sold county farmers on co-operative action to improve rams and lambs, concentrate and grade them at the road's livestock yards, and ship in volume lots. With aid from the county agricultural agent, and leadership by local farmers, a Highland County Lamb and Fleece Improvement Association was formed.

Thanks to grading and flock improvement, county producers throughout 1938 received an average of 91 cents more per 100 pounds than other marketers. In the first nine months of 1939 the premium over other marketers was $1.02 per 100 pounds. This gain was in addition to savings made through large-scale selling and transportation in carload lots. Attendant on this came a railroad freight increase.

Saving—Former costs of rewriting meter reading sheets have been reduced by 50 per cent at the Connecticut Light & Power Company, Hartford.

Rewriting of these sheets is no small problem for a public utility. The Connecticut company estimates that there are approximately 28,000,000 electric meters on lines in this country and

PRECISION *press, Aluminum Company of America, 25 feet above, 15 feet below floor; world's most powerful, head moving 36 inches a minute under full load.*



that records for about 90 per cent of them are kept on meter reading sheets. These have an average life of from two to three years, after which new ones must be written and two lines with five postings copied to the new sheets.

Since last Fall the Yankee utility has rewritten its sheets with the aid of a transfer posting machine which duplicates lines from a master page. The rewriting involves four steps.

First, a customer's name and address are placed on the new sheets by Addressograph. Then, from punched cards used in the billing department, items to be posted are tabulated on a master page. Third, the master page is inserted in the transfer posting machine and prints two lines of data on the new meter reading sheets. These are run through underneath it in the proper order. Fourth, special notations are copied manually on each sheet.

Guide—Showing by means of elaborately reproduced Kodachrome photographs what color does for homes, a huge paint merchandising guide is issued by the Sherwin-Williams Company, New York, for distribution to painters and paint stores. To anyone about to redecorate, it offers the detail, taste, and originality afforded by top-flight design experts.

There are 12 giant-sized pages in the *Paint and Color Style Guide,* 236 color plates. Paint store customers find in them information and display on such practical matters as how different colors affect the atmosphere of a room or building, making it seem larger or smaller, perhaps brighter, conservative, or restful.

Modelmakers—Back in the depression-scared years, model railroad building began. This year hobbyists' largest club, NYSME, the New York Society of Model Engineers, Inc., held its twelfth annual exhibition. A small army of people came; not merely curious spectators but craftsmen, with the engineer's fraction-loving eye, and the long, damp strand of hair that falls athwart the eyebrow when a man bends for hours over his workbench.

Model making, especially model railroad building, is achieving a long deferred recognition. Unpublicized godfather to NYSME and to the rail hobby has been Vincent Astor, on whose

GIRL SAYS: "I'm a *real* secretary now—not just a stenog. My work's faster, smoother and so much easier now that the Boss dictates to that beautiful, beautiful new Ediphone."

EDIPHONE SAYS: "O.K., I'm beautiful—but I'm a brute for work too. I'm rugged, fool-proof and a glutton for licking detail." (So's the streamlined floor model Ediphone.)

BOSS SAYS: "Notes, letters and instructions don't pile up and cut in on *my* time. I *talk* my work away now—to a new Ediphone!"

WE SAY: In almost *any* executive job an Ediphone will save you time and trouble . . . *You* try one. No strings to the offer. Just write Dept.D5, Thomas A. Edison, Inc., West Orange, N. J., or Thomas A. Edison of Canada, Ltd., 610 Bay Street, Toronto.

SAY IT TO THE **Ediphone**
EDISON VOICEWRITER

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Crane's
FINE PAPERS

MADE IN DALTON, MASSACHUSETTS
SINCE 1801

estate operates one of the most extensive scale model railroads in existence.

Biggest publicity break for model railroaders was a huge N. Y. World's Fair display by the Eastern Railroad Presidents' Conference. In previous years, most professional railroaders called the amateur breed pests, ran them off the yards; today trainmen cherish them as local goodwill builders.

Amateur enthusiasm includes the construction of scale models (with considerable expense for power tools), collecting historical photos, filing diagrams of signal systems. Our man Halsey knows one lad who has an attic full of timetables. From these he makes up his own schedules, plotting the Commodore Vanderbilt or the Hiawatha on an alien right of way.

Parking—Automobiles parked around a company plant occasionally block traffic or the delivery of material. Often, because of this, they are damaged. At Mine Safety Appliances Company, Pittsburgh, Pennsylvania, the industrial relations department has filed the license numbers of employee-owned autos. If a car is in the way, reference to the file shows where the car owner is located, and an inter-office call requests quick removal of the vehicle. The license numbers were obtained by inserting an explanation and questionnaire in the company's weekly *MSA News*.

Jim Sez—For many large companies an employee publication which calls the president "Old Man Lowe" and refers familiarly to a Vice President as Dick would be inconceivable, but for The Paraffine Companies, Inc., San Francisco, California, it's just one more way to make sacred cows of business give cream.

Paraffine's closed shop policy has been reported in various places. The latest of its labor-chummy pieces is "Jim Sez," a playlet. It consists of cartoons showing Jim, a foreman, and Bud, a new employee, touring the plant while they discuss company personnel policy and company heads with considerable slang and informality.

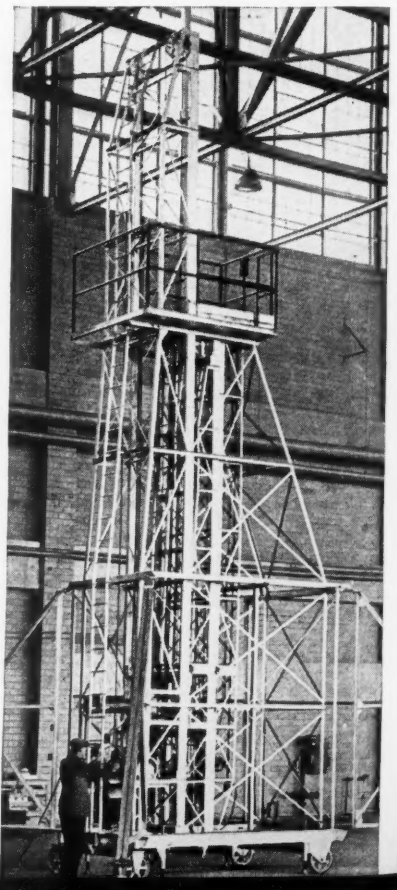
"The root of much labor trouble and many personnel problems in unionized as well as in unorganized plants lies in fears that plague the worker's mind," so Paraffine explains its reason for the playlet. "In enlightened companies most of the fears, like most of everybody's worries, are groundless. Yet these fears exist. Workers get uncertain and uneasy. As personal problems or emergencies arise, the worker speculates on the reaction of his employer."

While employees read "Jim Sez," the company was sponsoring a labor relations college, to which company and union supervisors came. CIO and AF of L business agents and shop representatives sat shoulder to shoulder with company foremen, accountants, and engineers, more than 300 in all. Meetings were held immediately after the day shift and were preceded by a free dinner in the company cafeteria.

Illiteracy—In 1937 there was a humped old farmer within 50 miles of New York City who thought the United States was still fighting Germany. He told about a German invasion of Long Island from U-boats, said President Wilson has been assassinated. He was illiterate, had no radio.

Illiterate too, according to a report of their director of education, are three out of every 100 boys who enroll in the Civilian Conservation Corps. Three-

LIFT—*Platform telescoper, Economy Engineering Company, Chicago, Illinois, stretches 21 to 68 feet in hangars of New York City's Municipal Airport.*



APPEARANCE

Some one is always talking about it.
I thought there was nothing to it.
Why dress neatly?
Why have clean clothes?
Why press them?
Why shine my shoes?
Why comb my hair?
Why be clean?
What does it matter?
You get no pay for it.
But appearance must be of help.
Good appearance helps you to meet people.
It helps to get a job.
It helps in many ways.
It is half the battle I think.

why	*why*	shine	*shine*
comb	*comb*	shoes	*shoes*
hair	*hair*	always	*always*
half	*half*	matter	*matter*
meet	*meet*	neatly	*neatly*
them	*them*	nothing	*nothing*
what	*what*	thought	*thought*
press	*press*		

38

CONVERSATIONAL—*Subjects of ordinary camp talk proved prime text-book material for CCC boys who were illiterate.*

fourths of the illiterates are white.

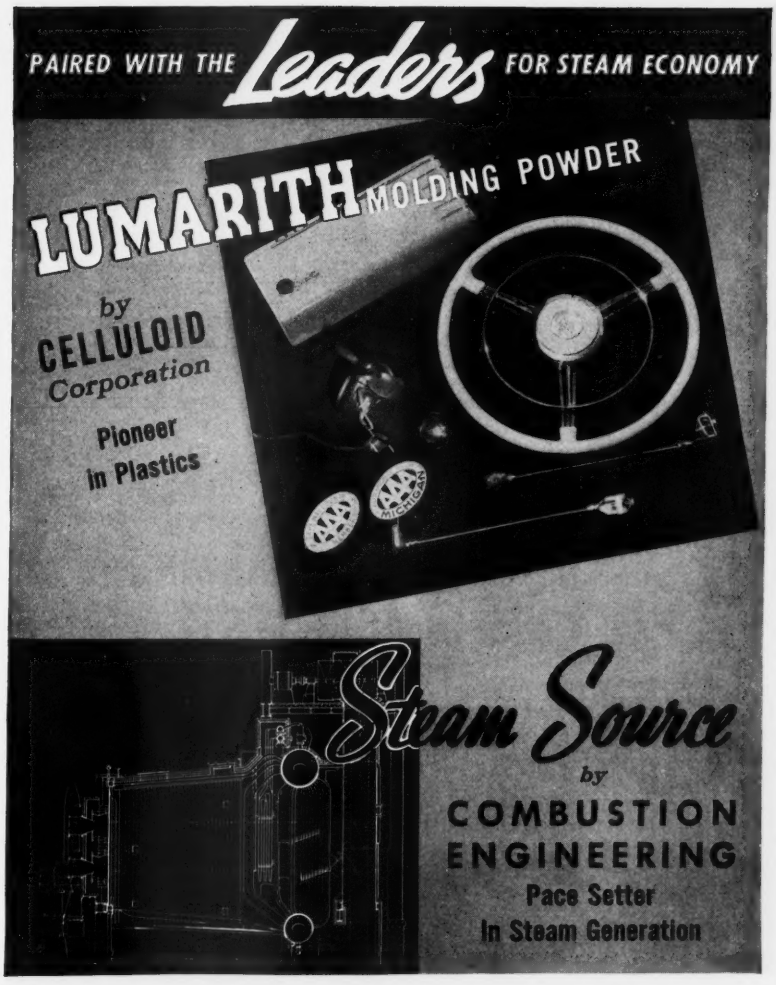
To remedy this lack of training, 80,000 young men in the CCC have been taught to read and write. After three months' instruction, most of them could send a simple letter home. The lesson book from which they learned is an interesting educational piece. It teaches by describing, in a vocabulary of 350 words, the daily events of CCC camp life.

Census Bureau statistics for the entire country (1930) indicate that an average of four persons out of 100 cannot write.

Luxury Loaf—Bread which sells for 20 or 25 cents per loaf is riding the tides of popularity this Spring; and large bakeries wonder restlessly whether they ought to bring out something similar or stick to their investment in ten cent loaves.

The luxury loaves are a product of small, local bakeries. They began as health breads, one of the best known being that of a woman named Margaret Rudkin, who first sold it from her home in Connecticut eight years ago. Called Pepperidge Farms Bread, it now has distribution through the Northeastern States. Selling a similar loaf for a nickel less is Frank G. Shattuck Company, whose Schrafft's chain introduced it February 29 and expanded sales rapidly.

Cause for the increase of these luxury loaves, aside from their distinctive flavor (honey for sweetening, butter



Your car, home and office all bear evidence of this "plastic age" with products and parts that range from steering wheels and saw handles to fish lures and fountain pens... all of which are today fashioned from this fascinating material. And the "grand-daddy" of this spectacular trend is the Celluloid Corporation, recognized leader of the plastic parade.

As usual, wherever progressive policies of manufacturing and merchandising prevail, it's natural to find progressive standards of selection applied to everything else from raw materials to steam generating equipment. In this respect, the Celluloid Corporation is no exception. Since the early days of the plastic revolution, the manufacturers of "Lumarith" have relied on C-E Steam Generating Equipment. 1937 saw the installation of two C-E units each with a capacity of 55,000 lb of steam per hr.

Expanding to meet increased demand for plastics, Celluloid Corporation is acquiring additional steam generating equipment in 1940. Again the choice is C-E, a VU Steam Generator with a capacity of 60,000 lb of steam per hr, the last word in advanced design and economical steam production.

So it goes through the "Who's Who" of American industry. You'll find C-E "paired with the leaders" as progressive management turns for its steam generating equipment to where it finds progressive standards of design and construction.

COMBUSTION ENGINEERING

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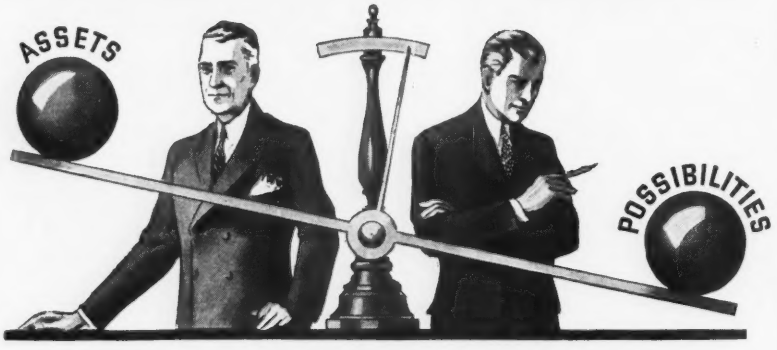
C-E PRODUCTS INCLUDE ALL TYPES OF C-E BOILERS, FURNACES, PULVERIZED FUEL SYSTEMS AND STOKERS; ALSO SUPERHEATERS, ECONOMIZERS AND AIR HEATERS

GOOD BUSINESS NEWS



OPEN ACCOUNT FINANCING WINS IN ACID TEST

Potential Sales Offset Discouraging Statement in Weighing Credit Worth

PUT yourself in the shoes of the President and principal stockholder of the Phoenix Company,* organized after the purchase of a bankrupt property appraised at around $275,000. Urgently in need of working capital, his first financial statement showed quick assets of only $42,000, including an estimated inventory of $35,000. Actual liabilities were about $50,000.

Given that picture, and no record of earnings, where would you go to attempt any borrowing, or permanent financing? Or, if you were a banker, how far could this application get with you?

Here's what actually happened. This company made inquiry regarding our Open Account Financing Service. We examined their statement, considered the character of management and the *potential* sales and earning capacity of the business. On this evidence, we promptly agreed to accept receivables for immediate discount, and the company's financing ceased to be a problem.

P. S. (FIVE YEARS LATER)—This concern is doing a business of about $800,000 a year. The last available statement shows quick assets of $208,000 over current liabilities of $119,000. Fixed assets are now carried, after depreciation, at $360,000, against which there is a mortgage of only $30,000. Open Account Financing carried the company through this period of growth.

* * * *

Though we serve many clients who require millions of dollars annually, we cite this record as a striking example of the ability of OPEN ACCOUNT FINANCING to succeed, where conventional methods might not even have been available. Investigate its possibilities for your business. Is your capital tied up in inventory? Investigate our Inventory Finance Plan. Write for "COMPARATIVE COSTS OF FINANCING." Address, Department "DR."

**A fictitious name, but the facts and figures, taken from our records, can be certified.*

COMMERCIAL CREDIT COMPANY

"Non-Notification" Open Account Financing

BALTIMORE

BOSTON NEW YORK CHICAGO SAN FRANCISCO LOS ANGELES PORTLAND, ORE.

CAPITAL AND SURPLUS MORE THAN $60,000,000

for shortening) is the use of a flour which formerly could be milled only in small quantities. It contains the whole wheat, including the vitamin-packed wheat embryo. Until the past year, only old-time, small-production grist mills could crack this wheat germ into flour. Under high-speed rollers it turned soft, oily, later rancid.

Today Morris Mills, Inc., Morris, Illinois, licenses millers to use a process for keeping their high-speed milling rollers cool, keeping the wheat germ brittle, crackable.

But wheat germ bread isn't the only development to interest bakers. There's also Salt Rising Bread, said to be easier to digest than regular white bread, capable of being cut thin as lace, and possessing a slight cheese flavor. Thanks to a new ferment discovered by H. A. Kohman, Mellon Institute, Pittsburgh, Pennsylvania, Salt Rising Bread can be made in large quantities, something not previously practical.

Actually, books could be written about different flavors of bread. In New Jersey Fischer Baking Company sells Zyvo, made from spinach flour. In Massachusetts, Hathaway Bakeries, Inc., offer Finnish style bread, dividing profits with the Finnish Relief Fund. Each nation has its own recipes, from China, which eats bread that is half pitch tree wood, to Lapland, whose Paltbrod is mixed with reindeer blood instead of milk or water.

Read on the Run—Non-rusting and strong enough to land marlin, tuna, or shark, a fishhook of "Z" metal, an alloy having 98 per cent nickel, is being manufactured by the Shoe Form Company, Auburn, New York. . . . Public speakers can get seven outline talks for National Foreign Trade Week, May 18 to May 24, from the Foreign Commerce Department, U. S. Chamber of Commerce, Washington, D. C. The outlines contain facts, statistics, and appropriate quotations. . . . Eat six meals instead of three and you'll grow slim without hunger, according to a Boston MD at a convention of the American College of Physicians. Idea is that you still live on a three-meal reducing diet but eat six half-meals and fool your stomach. . . . Advertising trick for attention: Blue Swan Mills "bleeds" a one column ad.

DEVELOPMENTS IN ACCOUNTING

(Continued from page 20)

property is not now worth replacing.

Inventories of plant and equipment and the estimates of the replacement costs thereof have important and varied uses in corporation practice, but employment as a basis for readjustment of capital assets in the balance sheet is not one of them. As may be said, too, of accounts in general, their great usefulness should be recognized, but it is wholly mischievous that the usefulness should be exaggerated or the limitations on the significance of the information be ignored.

Chairman Frank has commended to accountants the classic statement of Holmes: "The life of the law has not been logic; it has been experience." Cardozo, in *The Nature of the Judicial Process,* concurred:

"The common law does not work from pre-established truths of universal and inflexible validity to conclusions derived from them deductively. Its method is inductive, and it draws its generalizations from particulars."

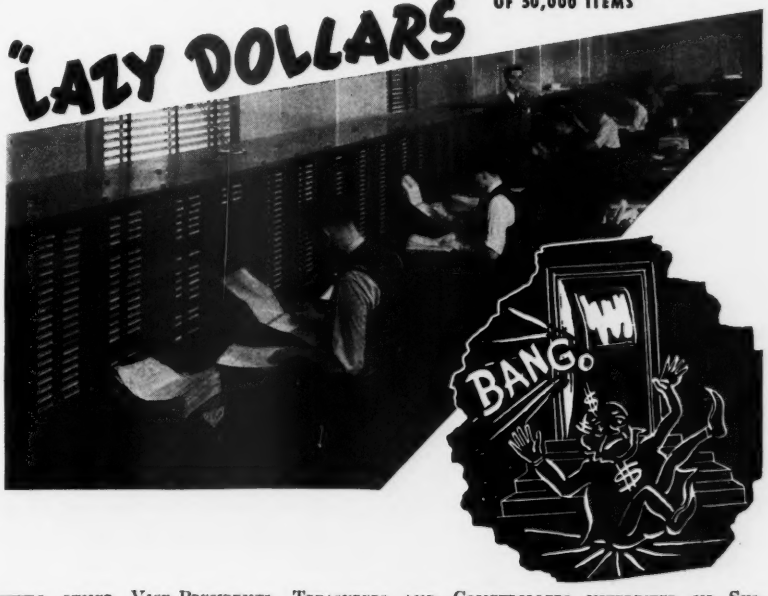
Three Forces

Cardozo not only distrusted generalizations but also recognized that some of them may conflict with others having equal validity. He goes on to discuss three great directive forces of our law: Logic or philosophy, history, and custom, and concludes: "Finally, when the social needs demand one settlement rather than another, there are times when we must bend symmetry, ignore history, and sacrifice custom in the pursuit of other and larger ends." We face the same problems in accounting; we should try to solve them in the same spirit.

I am convinced that the case for carrying fixed assets of corporations in general on the basis of historical cost, less depreciation, is well established, and that no more satisfactory alternative has yet been put forward. This conclusion will be reached whether the question be approached by the method of philosophy, the method of history, or the method of sociology.

In practice, the application of the method is sometimes defective, and

A VICE-PRESIDENT TALKS ABOUT ROUTING "LAZY DOLLARS" FROM AN INVENTORY OF 50,000 ITEMS

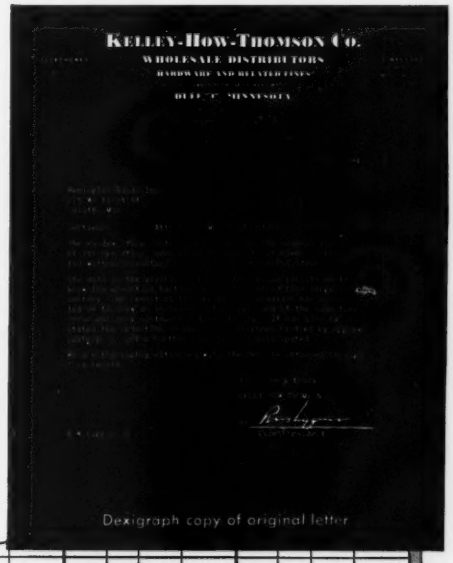


TO OTHER VICE-PRESIDENTS, TREASURERS AND COMPTROLLERS INTERESTED IN SYSTEMATIZING INVENTORIES TO PRODUCE GREATER PROFITS the complete story of the Kelley-How-Thomson Co., Safe-Kardex stock record will be of inestimable value.

Ten proven principles of profitable inventory control followed by this large wholesale house are:

Know the minimum quantity economical to maintain—know when ordering point is reached—know what items are on order—know all seasonal items—know instantly when items are out of stock—know what items are overstocked—know actual monthly consumption—know the turnover—know the profitable turnover—know your inventory.

Following these precepts is possible, without additional overhead, through a Kardex Inventory Control System.



Dexigraph copy of original letter

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Santa Fe

special cases occasionally arise in which a departure from the method may be warranted, but improvement is to be sought in dealing with these minor phases of the problem rather than in attempting to make any change in the basic concept. We all know of cases in which historical cost is measured by the par value of stock issued, although that stock is not now and perhaps never was either worth or selling for the par value. The remedy is not to abandon the use of historical cost, but to encourage and perhaps in some cases force a readjustment of both par values and carrying figures for property to bring both into closer relation with reality.

OVER THE EDITOR'S DESK

CONTRIBUTORS . . . COMING IN FUTURE ISSUES

GEORGE O. MAY, who discusses this month the "last-in, first-out" method of inventory valuation and related accounting developments (pages 17-20) has been a partner in Price, Waterhouse & Company since 1901. Further, within his profession, he is chairman of the Committee on Accounting Procedure of the American Institute of Accountants. Farther afield, he is also a director of the National Bureau of Economic Research, the American Statistical Association, and Council on Foreign Relations, Inc.

PACKAGE designing as a business in itself and Arthur S. Allen as a package designer have pretty much grown up with each other. For some 30 years of his business life (with four years out, beginning at age 27, to study at Harvard) Mr. Allen worked for ink companies. Helping container-making customers with their packages was only part of a busy job, though one customer he helped more than 25 years ago has kept his package the same ever since.

As time passed, designing and redesigning packages took up more and more of his time; eventually all of it, when he set up his own company six or seven years ago.

Mr. Allen was for three years president of the American Institute of Graphic Arts and for eleven the chairman of its committee on color standardization.

THIS is farewell to the series of business trend reports (pages 5-16), undertaken at half-yearly intervals since the beginning of 1938. When they were begun business men were sharply aware that sudden changes in sales and inventory levels, and changes in their relationships one to the other, might have painful consequences; they were equally aware that there was a dearth of comprehensive data on those important current trends.

PACH BROS., N. Y.
GEORGE O. MAY

The need for statistical buoys, lightships, and channel markers is still as urgent, but a number of other responsible agencies are now busy setting them out in business waters. There are, for example, the United States Department of Commerce, and the National Industrial Conference Board. The National City Bank continues to expand its tabulation of inventory trends among listed corporations.

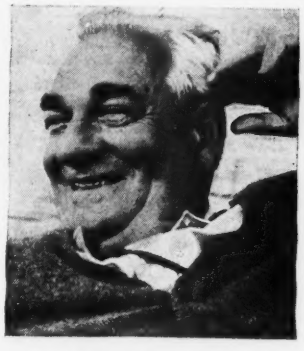
There is ample evidence that the Survey of Business Trends has served its purpose as a pioneering endeavor. Whatever merits the survey may have had, the companies who have contributed their figures to it should rightly regard as a reflection of their own farsightedness and co-operation.

Under the general supervision of Willard L. Thorp, the survey has been directed by Walter Mitchell, Jr.; in charge of editing and tabulating ques-

tionnaire returns was Fernley G. Fawcett.

In a statistical undertaking like the DUN & BRADSTREET survey a prime problem is to estimate accurately the trends in industries where the experience of the large companies may have differed from that of the smaller ones. One industry, for example, may consist of only two concerns with sales of more than $10,000,000 and several hundred concerns each with sales of only a fraction of that amount. If the two giants have made available their figures, but only a hundred of the pygmies have reported, simple addition cannot help distorting the actual picture.

In each industry and trade, to correct for this distortion, the relative importance of six and, in some cases, seven sizes of concern, ranging from large to small, was computed from Census and Treasury figures. Each participating concern was placed in its proper size group; the trends of sales and inventories were computed for each group separately; and each group's experience was given its proper weight in the estimate of trends for the industry.



ARTHUR S. ALLEN

A similar procedure was followed to give each industry no less and no more than its proper influence in establishing the trend for manufacturing as a whole. The same two-step method was used in deriving the wholesale and retail estimates, but was not possible with estimates for the construction and service fields.

Results of this type of benevolent manipulation contrast strikingly with regimentation of all data on an adding machine without regard to relative importance. For instance, a tabulation published some time ago, with laudable promptness, compared the 1938 and

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Population	90%	Value of Mfd. Products	91%
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Native White Families	88%	Dairy Products	88%
Total Wealth	88%	Lumber	51%
Passenger Cars	84%	Coal	94%
Commercial Cars	83%	Manufactured Gas	95%
Retail Sales	88%	Steel	98%
Bank Assets	90%	Electrical Horsepower	82%
Bank Savings Deposits	88%	Petroleum Industry	83%
Number of Telephones	88%	Wheat Production	81%
Effective Buying Income	87%	Corn Production	99%

20,283 PRESIDENTS

There are 20,283 company presidents reached by DUN'S REVIEW each month. A name-by-name analysis—below—shows that they are the heads of the active companies throughout industry and business.

	Totals
Manufacturing	12,317
Wholesaling	5,430
Banking, Insurance, Financial	1,448
All Other (retail, transportation, etc.)	1,088
Total	20,283

In addition, there are 1,849 Owners, Partners, and Proprietors; 124 Chairmen of the Board; 1,904 Vice-presidents; 2,075 Treasurers; 2,377 Secretaries; distributed approximately as above (complete breakdown available.) Average total edition: 53,153.

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1939 sales of several hundred manufacturers. The results were not definitely declared to be typical of all manufacturing, but newspaper reporters made that assumption in the absence of a specific warning; and the figures—sales up 12½ per cent—were widely published. Yet the DUN & BRADSTREET estimate of 17 per cent is nearly half again as hopeful.

Investigation of the former survey revealed that 20 per cent of its melting pot consisted of large petroleum refiners whose sales had increased hardly at all; 1937 Census of Manufactures data suggests that the industry's proper weight in the manufacturing total should have been about 4 per cent. Conversely, there were included no data from the automobile industry, whose sales in 1939 recorded one of the most spectacular advances.

Special Check

The figures in the DUN & BRADSTREET survey have this year been subjected to a special test. With independent percentage trends for compasses, both sales and inventory estimates have now been "flying blind" for four years since leaving the latest available Census base (manufacturing is an exception, with the latest Census in 1937).

If peculiarities in the survey sample have upset one or the other of these compasses, the courses which the trends have navigated may have veered progressively away from or toward each other. The error would not be discernible or of practical significance in a one or two-year jump, but after four years it is worthwhile to cross-check the "compasses." For instance, if several years' experience has established in a given trade that sales are commonly about three times the dollar value of inventory, a failure of projected sales and inventory figures to fall somewhere near this relationship is the signal for a special investigation. About one trade or industry out of every ten covered by the survey required some correction in the dollar value base figures, but in no case do these corrections affect the latest year's trends.

For those who wish it there is available on request a table showing trade-by-trade the size of the sample and the proportions of concerns whose trends

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followed those of their especial line of business.

THOUGH a shortage of skilled workers is especially evident just now in the aircraft and machine tool industries, the problem is, in varying degrees of acuteness, general to all industry. In an article next month, William F. Patterson, Chief of Apprenticeship of the Division of Labor Standards of the United States Department of Labor, will trace the shortage to its source—industrial apprenticeship policies.

AS PUBLISHED each month in DUN'S REVIEW, the Regional Trade Barometers (pages 34-39) have already been corrected for seasonal variation. Next month Dr. L. D. H. Weld, who regularly contributes the figures, will make available the seasonal corrections for each region, data which should enhance further the Barometers' usefulness to business men, whose own sales figures typically are not adjusted for seasonal divagations.

IN ANOTHER article next month Edwin B. George will discuss three aspects of price control by government: the types of regulation which have emerged in the last decade, further possible controls still in the offing, and weaknesses which have developed in the theory and practice of governmental price making.

DUN'S REVIEW

290 BROADWAY NEW YORK, N. Y.

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More detailed breakdowns of those statistical data originally compiled by the publishers—business failures, bank clearings, building permits, and price indexes which are summarized and interpreted each month in DUN'S REVIEW (see pages 21-24, 40)—are published monthly in DUN'S STATISTICAL REVIEW, tables only, no text, $1 a year; $2 outside the United States.

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HEAT AND LIGHT

"I'VE DECIDED not to discuss war or politics with anyone," he told me. "Lots of people want to tell me what they think, but they all seem to be so sure of their position that there really isn't anything to discuss. They get mad if I disagree at all. They don't really want to find out what I think unless I agree with them."

Good discussion depends on two conditions—opinions not finally and emphatically fixed, and a real interest in the other person's point of view. Many people talk solely for the purpose of winning converts to their own inflexible beliefs.

Can one ever be absolutely certain about social and political matters? There is usually something to be said on the other side. The inquiring mind doesn't get emotional, but says, "Here is my opportunity to find out how an intelligent person can take a view different from mine."

Willard L. Thorp.

EDITOR